THE INFLUENCE OF INFLATION ON STOCK PRICE

A THESIS

Presented as a Partial Fulfillment of the Requirements to Obtain the

Bachelor Degree in Management Department

by

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Herein I declare the originality of this thesis; there is no other work which has ever presented to obtain any university degree, and in my concern there is neither one else's opinion nor published written work, except acknowledged quotation relevant to the topic of this thesis which have been stated or listed on the thesis bibliography.

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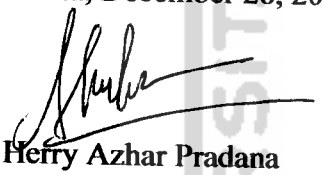

Herry Azhar Pradana

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TABLE OF CONTENT

APPENDICES LIST

TABLES LIST

ABSTRACT

This research has an objective to examine the Influence of Inflation on stock price in Indonesia, whether it is negative, positive or flat, in relation to the following macroeconomic variables: interest rate, money growth, oil price, gross domestic product, financial deregulation, and financial deficits. The research selects the populations and samples based on the purposive sampling. The test conducted by using a regression with stock price as a dependent variable, inflation as an independent variable, and interest rate, money growth, oil price, gross domestic product, financial deregulation, and financial deficits as control variables that is also included as independent variables.

The results support the hypothesis that inflation has a negative effect on stock price. However, the control variables result is not consistent with the prediction. Although the control variables are not consistent, they do not disturb the researcher's examination since it is not what the researcher focus on. An important implication of these findings is that since most of the factors unrelated to market fundamental are found to exert insignificant effect on stock prices, the Indonesian stock market can be described likely to be an efficient.

Keyword: inflation, stock price, stock market, supply shock, demand sock

ABSTRAK

Penelitian ini bertujuan untuk meneliti apakah inflasi (inflation) berdampak positif, negatif, atau *flat* dengan harga stock (stock price), yang berhubungan dengan beberapa variable macroeconomic lain yaitu *interest rate, money growth, oil price, gross domestic product, financial deregulation, and financial deficits.* Penelti menggunakan metode *purposive sampling* dalam menentukan populasi dan sampel yang akan digunakan dalam penelitian. Penelitian ini menggunakan regresi untuk membuktikan hipotesis dengan stock price sebagai dependent variable, inflasi sebagai independent variable, dan *interest rate, money growth, oil price, gross domestic product, financial deregulation,* dan *financial deficits* sebagai control variable yang juga termasuk dalam independent variable.

Hasil penelitian mendukung hipotesis bahwa inflasi mempunyai dampak negatif terhadap harga stock. Namun demikian, hasil dari control variable tidak sesuai dengan prediksi sebelumnya. Walaupun control variable tidak sesuai, hasil tersebut tidak mengganggu penelitian yang difokuskan oleh peneliti yaitu antara inflasi dengan harga stock. Secara umum dapat diketahui bahwa penelitian ini membuktikan bahwa hampir semua eksternal variabel control tidak berpengeruh secara signifikan terhadap pergerakan harga saham, dengan demikian pasar saham di Indonesia di indikasikan efisien.

Kata kunci: inflasi, harga saham, pasar saham, supply shock, demand shock

CHAPTER I

INTRODUCTION

1.1 Study Background

Inflation is an economic problem that most countries have to deal with, in fact most countries have faced it. Whether it is demand pull inflation, or cost push inflation, both have a massive influence on business practice. Financial markets continue to remain uneasy when dealing with high inflation rates. Much research had been conducted regarding this issue, and it show varies result depending on time period of research and where the research is conducted.

There is no unanimous conclusion among researchers regarding these issues yet. Some studies state that stock prices move in the same direction as inflation, and the others argue that it has the inverse relationship. Fisher's hypothesis stated that equity stock which represents claims against real assets of a business may serve as a hedge against inflation. On the contrary, many studies have found evidence that contradicts to Fisher's hypothesis. They show that changes in both expected and unexpected inflation are negatively correlated with stock prices. Fama (1981) states that rising inflation rates reduce real economic activity that then negatively affects corporate profits and stock prices. With time-series analysis Anari and Kolari (2001) report negative correlations between stock price and inflation in the short-term, on the

other hand the relationship between stock price and inflation become positive in the long-term.

A combination of money demand effects, along with both the practice of debt monetization and countercyclical monetary policy responses by the central bank is said to give rise to an inverse relationship between stock return and inflation

Several studies such as Kaul (1987), Pearce and Roley (1988), Ball and Mankiw (1995), Fats and Mihov (2002), Mountford and Uhlig (2002), Patrick J. Hess and Bong Soo Lee (2003) have investigated the relationship between stock price and inflation in the United States (US) and other industrialized economies, yet very few studies addressed the same issues for developing countries. In Indonesia, there have been various studies conducted to examine the relationship between exchange rates and stock price such as Endah Heni P. (2003), Agus Herdjito (2003), and Sanjoyo (2001). Despite the fact that Inflation rates in Indonesia are higher than in other Asian countries, there are very few that have examined the influence of inflation on stock price.

Theoretically, interest rates has been identified as one of fundamental determinants of stock price, but recently some analysts have suggested that inflation has a greater impact on stock prices rather than interest rates. The main objective of this paper is to analyze the empirical relationship between inflation and stock price, whether inflation causes stock prices to decline, rise or remain unchanged. As previously mentioned, recent studies are largely mixed and problematic, that is why it

is very important to examine the empirical relationship between inflation and stock prices.

Based on the background above, the researcher would like to propose a research study entitled:" *THE INFLUENCE OF INFLATION ON STOCK PRICE*".

1.2 Problem Identification

Several studies have focused on Supply and Demand shocks to examine the influence of inflation on assets return. Supply shocks reflect real output shocks and cause negative effect between stock returns and inflation. While demand shock are mainly due to monetary shocks and generate positive effect between stock returns and inflation. However other studies show that the effect of inflation on stock price varies over time and across countries, depending on the relative importance of two types of shocks. Based on the previous studies that are mixed and problematic, the researcher would like to focus on the two types of shocks, supply shocks and demand shocks caused by due to the effect of inflation on stock price in Indonesia.

1.3 Problem Formulation

The researcher would like to examine the supply and demand shocks and how it is affects the stock price movement in Indonesia Stock Market. Therefore the problem is formulated as follows:

1. How Stock Prices change due to Inflation and a battery of other macroeconomic variables: interest rate, money growth, gross domestic product, oil price, financial deregulation, and financial deficits.

1.4 Research Objective

1. To examine the influence of inflation on stock price in Indonesia, whether it is negative, positive or flat, in relation to the following macroeconomic variables: interest rate, money growth, gross domestic product, oil price, financial deregulation, and financial deficits.

1.5 Research Contribution

This research examines the influence of inflation on stock price which the researcher hopes that the research will be beneficial for the following parties:

1. Companies

   This research is mostly beneficial for the companies themselves since it can give them a comprehensive measurement on how stock prices change due to the external factor such as an inflation and other macroeconomic variables: interest rate, money growth, gross domestic product, oil price and financial deficits.

2. Investors

   This research can be used as a reference and guidance and it is hopefully used for an assessment of risk and return resulting from an investment analysis.

3. Academicians

Hopefully this research can be useful as a reference for the academicians, lecturers, students, and others, and also as sources of data in conducting other researches related to financial and investment management.

1.6 Systematical Writing

The first section of this paper will discuss about the overview and also the objective and contribution in conducting research. *Section 2* will broadly explain about each variable and any items which are related with this research and also formulate the hypothesis to find whether the effect of inflation on stock price in Indonesia, is negative, positive or flat, in relation to the following macroeconomic variables: interest rate, money growth, oil price, gross domestic product, and financial deficits. *Section 3* will discuss the research method used in this paper to prove the hypothesis formulated in section 2, including the explanation about population and sample and about its variable definition and measurement used for research study. *Section 4* will provide the result of hypothesis measured by the method explained in section 3 and whether we can accept or reject the hypothesis. Accordingly, we can get the conclusions and maybe recommendation regarding the result achieved by researcher in *section 5*. Last, the data and statistical results will be available in the appendices.

CHAPTER II

THEORETICAL FRAMEWORK

2.1 Inflation

Inflation is a general increase in the price level of goods and services. Unexpected inflation tends to be detrimental to security prices, primarily because it forces interest rates higher. A point to keep in mind is that a certain amount of inflation is already embodied in security prices (Scott; 2003).

Inflation is the tendency of prices to increase continuously in a specific period of time. Inflation also can be assumed to be the increase of prices in the economy as the result of an increasing in aggregate demand or a decreasing in aggregate supply (William; 2000).

Anticipated or expected inflation is presently recognized by financial market participants and embodied in expected security returns. In this view, we assume that a single index effectively portrays the general price level at various moments in time. The anticipated rate of inflation is defined in terms of the expected annual rate of changes in this index. If the inflation that actually occurs over the life of a security is exactly that which was anticipated when its terms were set, neither borrowers nor lenders gain (or lose) because of inflation (Van Horne; 1983).

Increase in prices in the inflation period can be measured by Price Indexes. Some price indexes that are used to measure the inflation include: the Consumer Price Index, the Whole Seller Price Index, and the GNP Deflator.

2.2 The Effect of Inflation on Stock Price

In macroeconomics perspective, there are a lot of factor that might influence the economic activity of a company, such as Gross Domestic Product (GDP), Money Supply, interest rate, inflation, Oil Price, Financial Deficit, Financial Deregulation, etc. Each of these factors has a different effect to the stock price. GDP for instance, it indicates level of consumption, investment, and overall growth of economy, therefore, an increase in GDP will accelerate the performance of a company, hence will increase the stock price. Conversely, the oil price volatility will increase the risk of holding stock, since it will induce the increasing of expenses for the company operation, that consequently will reduce profit, which the main driver of stock price.

Theoretically, inflation could be neutral with respect to stock prices. In such an Inflation-indexed world, news of higher-than-expected inflation is incorporated into the numerator (higher cash flows as the price increases are passed on to the consumers) of a discounted cash flow model, with an

offsetting adjustment in the denominator (higher discount rates to compensate stockholders for losses in purchasing power).

In contrast to this theory, inflation might not be neutral in practice. Nelson (1976) and Fama and Schwert (1977) found a significant negative effect of inflation on stock return. Further evidence of and explanations for the negative relationship include Feldstein (1980), who points to the tax treatment of depreciation and inventories; Modigliani and Cohn (1979), who posit irrational investors caught in a "money illusion"; Fama (1981), Geske and Roll (1983), and Kaul (1987), who appeal the real output effects.

Mondigliani and Cohn (1979) have shown that expected stock returns should equal the current earning yield on stocks (defined as earnings over price E/P) plus an inflation premium. Intuitively, this forecast can be justified by the fact that if stocks paid out all earnings as dividends, the earning yield would equal the current yield from owning stocks, and if profit margins remained constant, nominal earnings and stock prices would grow at the rate of inflation. Even if the companies reinvested some earnings instead of paying all of them out as dividends, the earnings yield would still be a valid predictor of the real return on equity if the corporate reinvestment rate equaled the required rate of return (Siegel 1999).

Nevertheless, prior studies have found very little evidence of a positive effect of inflation on stock return (Erb et al., 1995). Although Renshaw (1997) recently presented time series data that may be consistent

with the Modigliani and Cohn (1979) model, his research concentrated on earlier short-term results subjectively chosen from his larger data sample, and he provided no statistical evidence on the model's accuracy nor did he explain the contradictory empirical evidence.

Fama (1981) and Geske and Roll (1983) explain the negative effect of inflation on stock returns, based on money demand theory and the quantity theory of money. Their hypothesis predicts that rising inflation rates reduce real economic activity and the demand for money. A reduction in economic activity negatively affects a company's future profits and stock prices. The resulting negative effect of inflation on stock returns is referred to as the "proxy effect". Fama argues that the proxy effect will disappear when real economic activity does not fall because of inflation.

Fama and Schwert (1977) found that an increase in expected inflation of 10 percent would cause a decline in expected stock returns of 50 percent. This research used Treasury bill yields for measuring expected inflation, so it showed more directly as a negative effect of interest rate on stock returns. They also document a negative effect of inflation on subsequent stock returns, and a negative effect of expected inflation on contemporaneous stock returns. Geske and Roll argue that this relationship is spurious. However the reversed causality argument is only capable of explaining a contemporaneous relationship between interest rate changes and stock returns.

2.4 Hypothesis of Inflation and Stock Price

Numbers of studies have documented the inverse relationship between real common stock returns and various measures of both actual and expected inflation, see Bodie (1976), Nelson (1976) and Fama and Schewert (1977). The literature is generally divided in opinion, however, over the reason why equities might fail to maintain their value during periods of inflation. This paper presents the hypothesis that has been advanced as possible explanations for this anomaly.

2.4.1 Tax Effect Hypothesis

This hypothesis focuses on the treatment of depreciation and the valuation of inventories in a period of inflation. Particularly, stock prices fail to keep pace with inflation because inflation increases corporate tax liabilities and thus reduces after-tax earnings. Here, inflation can be said, in an economic sense, to "cause", or more precisely to temporally precede, movements in stock prices.

While the theoretical justification for the tax-effect hypothesis is generally acknowledged, formal empirical evidence is more problematic. When a firm's computation of tax is based on historical-cost accounting methods for both depreciation and the cost of goods sold, tax deductible firms costs differ from the current costs of factors of production. It follows the real aggregate corporate tax liabilities, and then should vary directly with the rate of inflation.

Following this line of reasoning, Gonedes (1981) attempts to assess the impact of both expected and unexpected inflation on various measures of the

aggregate corporate tax burden over the period 1929-1974. Contrary to the expectation, Gonedes presents evidence that appears to be inconsistent with the tax-effect hypothesis. Specifically, aggregate real corporate tax liabilities over the period from 1929-1974 are found to be unrelated to various measures of inflation, rather than positively affected by inflation, and thus not in support of the tax-effect hypothesis.

Gonedes attributes the lack of empirical verification of tax-effect at work to an implicit "indexing" that has occurred over the period 1929-1974. Indexing the tax code with respect to both depreciation and inventory charges would eliminate the effect of inflation on stock prices. Gonedes argue that de facto indexation has been achieved through such factors as:

1. The implementation of accelerated depreciation schedules.
2. Various subsidies, such as the investment tax credit.
3. Decreasing the service life on depreciable assets, all of which occurred simultaneously over the period 1929-1974.

Over the time period November 1977 through December 1982, Pearce and Roley (1988), examined the impact of unanticipated inflation on firm's stock prices by considering these potential penalties and benefits. Historical cost of inventories is found to adversely affect stock prices. But, depreciation expenses are not a significant factor in explaining movements in stock prices. Finally the magnitude of firms' outstanding debt is found to have a positive affect on stock prices, indicating that inflation, in part, reduced the real value of firms' liabilities.

Adherents of the tax-effect hypothesis argue that the adverse effect of inflation on stock price stems primarily from two sources, inflation' effect on after tax earnings of firm's and inflation's effect on individuals' portfolios. From the stand point of firms, inflation has a detrimental effect due primarily to two features of the US tax Code. The first of these features is the treatment of depreciation. Traditionally, the value of a depreciation deduction allowed for firms has been based on the original or "historic cost" of an assets, and not on its full replacement value. In a period of rising prices, then, the value of depreciation allowance becomes inadequate and real corporate tax liabilities increase. In this way, inflation leads to a reduction in real after-tax earnings of firms and a consequent reduction in real dividends and stock prices.

Also contributing to the adverse effect of inflation on the firm is the treatment of inventory valuation under the US Tax Laws. When inventories are valued under First In First Out (FIFO) accounting, inflation leads to an understatement of the costs of replacing these inventories. As is the case under the use of historic-cost accounting for depreciation charges, inflation raises the effective corporate tax burden, thus depressing net earnings. Each of above factors, depreciations allowances and inventory valuation, acts to make inflation a penalty to firm's profitability; consequently, inflation penalizes a firm's dividends and stock prices.

The net corporate burden caused by inflation thus depends on a comparison of the penalty arising from historic-cost accounting method to the benefit arising from the deductibility of nominal interest payments on debt. Using simulation analysis,

Hasbrouck (1983) found that, under tax laws in effect through 1980 in the US, the loss due to historic-cost accounting outweighs the leverage gain at low inflation rates. Hasbrouck estimates that the corporate tax-maximizing inflation rate is in the range of 7-9 percent. Beyond these rates, inflation actually reduces the corporate-tax burden since gains resulting from the use of debt financing outweigh the effects of historic-cost accounting. It is worth noting that from 1973 to 1980, when real stock prices tended to fall, the rate of inflation averaged 9.2 percent per year. Interpreted in light of Hasbrouck' estimates, stock prices fell during a period in which inflation had risen to roughly its corporate tax maximizing rate, indicating the possibility of an adverse tax-effect at work.

There are, however, other methods by which taxes and inflation can interact to lower firms' stock prices. One of these methods, as outlined by Martin Feldstein (1980), pertains to the manner in which tax rules and inflation interact to raise individual's effective rate of discount. Feldstein's argument relies principally on the assumption that individuals invest in a wide range of alternative assets (stocks, bonds, land, gold, owner-occupied housing, tax-free instrument, etc). Furthermore, although inflation generally reduces a firm's profitability and thus reduces the rate of return on stocks, it tends to raise the relative return offered on a variety of other assets.

Therefore, since they must pay income tax on both dividends and capital gains, thy pay taxes on nominal interest income from corporate bonds and invests in a much wider range of alternative instruments; individuals will substitute out of corporate stocks and bonds in times of raising prices. The effect of this substitution is

to increase the real cost to firms of rising capital or, viewed alternatively, to increase the real rate at which individuals discount their before-tax dividends received from firms.

2.4.2 Proxy-Effect Hypothesis

In view of the criticism of the tax-effect hypothesis, an alternative framework has been developed to explain why inflation and stock values are inversely related. This explanation, known as the proxy-effect hypothesis, argues that expected future output growth and current inflation are inversely correlated. In its current form, this hypothesis involves two assumptions, one that cyclical variations in output and earnings growth are positively correlated, and the other that monetary policy is countercyclical. The central tenet here is that lower stock returns signal lower expected future output and earning growth, which, in turn, initiates a countercyclical policy response by the central bank. Individuals anticipate the expansion in the money supply and thus anticipate future inflation, which leads to an increase in current inflation. So, when stock returns fall, inflation increases. Although inflation, in this case, is negatively correlated with stock returns, more precisely, stock returns temporally precede inflation. Thus, in an econometric sense they are said to "cause" inflation.

Inflation is said to be merely proxying for expected output or earnings growth in statistical tests of the relationship between stock returns and inflation. According to the proxy-effect hypothesis, any significant inverse relationship between these two

variables is spurious, because it induces a direct relationship between stock returns and expected output growth together with an inverse relationship to expected future output growth and inflation. In contrast to the tax-effect hypothesis, the proxy-effect hypothesis claims that inflation has not been a causal factor in the performance of real stock prices, but rather, the relationship between inflation and stock prices is spurious.

The proxy-effect hypothesis was first introduced by Eugene Fama (1981). Fama's explanation for the inverse relationship between expected economic activity and current inflation follows from two key assumptions, which individuals are rational in the sense of making use of all available current information relevant to their money and financial decision, and that individual's current demand for money is related to future real economic activity and current interest rates. Then, assuming that the money supply, real economic activity, and interest rates are exogenous, this demand for money, in effect, becomes a vehicle for the transmission of expected future inflation to current inflation. Following Fama's assumption that interest rates and the money supply are exogenous; the excess supply of money is accompanied by an increase in the price level to restore monetary equilibrium. Essentially, the forward looking nature of individuals money demand generate an inverse relationship between current inflation and expected future growth in GDP. This enables a decrease in future output growth to cause both a decline in current stock returns and an increase in current inflation.

Geske and Roll (1983), who found the assumption of an exogenous money supply-have, proposed an extension of Fama' arguments. These authors posit that in fact, a "reverse causality" actually drives the inverse relationship between stock return and inflation. In contrast to earlier work which hypothesized a causative influence of inflation on stock returns (and in contrast to Fama's model in which inflation and stock returns are spuriously related), it is stock returns which cause inflation.

Geske and Roll merge a sequence of events by which this reverse causality comes about. In order to illustrate the Geske and Roll hypothesis, consider the case where expectations regarding future GNP growth are lowered. Stock prices decrease in response to projections of slower growth which leads to a decline in both personal and corporate income. Government tax revenues then decline which leads to a deficit in government revenue. That is, Geske and Roll suggest that a decline n expected future economic activity should be followed both by a decline in government revenue and by an increase in the federal budget deficit. The next step in the Geske and Roll model involves the central bank. When deficits begin to grow, an outstanding government debt is increases. The central bank chooses to monetize a portion of this debt, thus leading to inflation. Since this debt monetization is anticipated by rational individuals, a decline in the stock market will cause an increase in expected future inflation. Therefore, stock returns are inversely correlated with expected future inflation.

Geske and Roll point out that change in expected inflation tend to be highly correlated with unexpected inflation. This explains the negative association between stock returns and unexpected inflation which Fama (1981) found puzzling. Finally, through individuals' forward-looking behavior, the increase in expected future inflation is transmitted to current inflation. In terms of the model developed earlier, dividends fall first, due to an anticipated cyclical contraction in output.

The Fama model excludes any responses by the monetary authority while Gaske and Roll stress a policy response of debt monetization. An extension of these arguments is developed by Kaul (1987) who agrees that the relationship between stock returns and inflation is spurious. Following Fama, Kaul stresses the importance of money demand linkage in his analysis but is also willing to incorporate a response by the monetary authorities. Unlike Geske and Roll, however, this response does not hinge exclusively on the practice of debt monetization. Rather, Kaul presumes that the central bank follows a countercyclical money supply process.

The full sequence of events as viewed by Kaul occurs as follows. First, the expected future output declines, which is signaled by a fall in stock prices. US national Banks, The Fed, then responds with a countercyclical policy which results in an increase in the money supply. This causes both an increase in current inflation and an upward revision of expected inflation. As a result, there is an observed inverse relationship between stock returns and both actual and expected inflation.

Kaul's version of the proxy-effect hypothesis thus incorporates two commonly accepted effects of a perceived reduction in future GNP growth. For one,

the anticipated slowing of GDP growth lowers current stock returns, for another, it also causes a monetary expansion, and thus inflation. These two alone are sufficient to generate the inverse relationship often found between stock returns and inflation. The inverse relationship between expected future GNP growth and current inflation now is the result of the equilibrium process in the monetary sector.

Empirical evidence that supports the proxy-effect hypothesis is extensive and generally may be divided into the categories outlined above in reviewing the theoretical linkages between stock returns and inflation. Recall that the key to the spurious relationship between inflation and stock returns in Fama's hypothesis is that movements in expected future economic activity cause movements in both expected and actual inflation. Empirical evidence relating real stock returns to both expected and unexpected inflation reveal a significant negative relationship. However in multiple tests which also include real expected output growth, expected inflation loses its significance in explaining stock returns. This evidence suggests a spurious relationship between expected future inflation and current stock returns. Note also that, unexpected inflation remain significant in nearly all of Fama's tests (all but those using annual data), and the expected term loses significance in explaining real stock returns only when the growth rate of the monetary base is added to the set of explanatory variables. Fama points out that his measure of expected inflation is highly correlated with monetary base growth. Therefore it is possible that one proxy for expected inflation has simply replaced another and the puzzling relationship between stock returns and inflation remains.

Turning now to empirical evidence on other views of the proxy-effect hypothesis, recall that Geske and Roll view current stock prices as driving current inflation through a practice of debt monetization by the central bank. Geske and Roll offer as empirical evidence a series of transfer function which purport to establish the linkage between stock return and inflation in their model. For the most crucial element of this linkage, however-the practice of debt monetization- Geske and Roll do not offer compelling evidence. Empirical verification of the existence of debt monetization by the Federal Reserve is mixed, at best.

Geske and Roll points out that the detectable effect of Federal Reserve System treasury debt holdings on the Fed's issuance of base money is very small in estimated magnitude; however, it is significant. Kaul (1987) presents empirical evidence for the US, as well as for Canada, the UK and Germany, consistent with the central tenets of the proxy-effect hypothesis. The regression result indicates a positive relationship between stock returns and expected real activity. Inflation and expected real activity are found to be negatively related, Kaul argues, due to both a countercyclical monetary policy response and to the practice of debt monetization.

2.4.3 Mundell-Tobin Hypothesis

Mundell (1963) and Tobin (1965) suggest a negative relationship between real stock returns on financial assets and (expected) inflation. They argue that an increase in expected inflation reduces the perceived yield on money, which causes portfolio substitution from money to interest bearing assets. This depresses the real returns on

assets, reducing the cost of borrowing and stimulating investments and real economic activities. Thus, the Mundell-Tobin hypothesis is based on the negative correlation between real returns on financial assets and real economic activity and explains a negative relationship between assets returns and inflation. The Mundell-Tobin hypothesis seems to provide only a partial explanation for the correlation between asset returns and inflation. The Mundell-Tobin hypothesis is primarily based on the monetary channel of inflation, largely ignoring the supply channel of inflation that results in a positive correlation between asset returns and economic activity. The positive correlation between real returns and real economic activity is, however, consistent with Fama and Gibbons (1982).

2.5 Previous Studies

2.5.1 Supply Shocks

The classical theory of inflation rules out any implication of relative price changes, which are believed to be driven by real factors, for aggregate inflation. According to this view, for a given stock of money, increases in some prices are offset by decreases in some other prices, and thus aggregate price level is left unaltered. The aggregate price level changes only when the money supplies changes. In other words, according to the classical view, inflation is driven by aggregate demand factors only. During the seventies, high inflation was accompanied by a low

level of output, a phenomenon called stagflation. The classical framework did not seem to explain this extraordinary phenomenon very well.

On the other hand, this could consistently be explained by changes in aggregate supply conditions. Also, a closer look at the anatomy of the inflation during that period reveals that this inflation was mainly driven by changes in relative prices of a few commodities such as oil and food. Thus the relative price changes had the essential traits of an aggregate supply shocks.

Writing on the stagflation phenomenon of the seventies, Blinder (1982) argued that 'the dramatic acceleration of inflation between 1972 and 1974 can be traced mainly to three "shocks": rising food prices, rising energy prices and the end of the Nixon wage-price controls program'. Similarly, he attributes the acceleration of inflation between 1978 and 1980 to food shock, soaring energy prices and rising mortgage rates.

Ball and Mankiw (1995) develop the positive correlation between inflation and relative price dispersion to propose a theory of aggregate inflation, in which relative price changes are considered to be aggregate supply shocks. They argue that the existence of such correlations is 'a novel empirical prediction' of a menu costs model. Because of "menu costs" (the costs of adjusting prices) firms' responses to shocks are asymmetric: they adjust prices only in response to large shocks when it is worthwhile paying the costs of price adjustment. Thus large shocks have disproportionate effects on the price level and the resultant changes in relative prices have implications for aggregate inflation: if the distribution of price changes is

skewed to the right, a shock will lead to more increases in relative prices than decreases and inflation will be higher. On the other hand, when the distribution is skewed to the left, decreases in prices occur more quickly than the increases in prices and the inflation is lower. This supply-side theory thus predicts that the change in relative price will be correlated with aggregate inflation. This theory further suggests that high variability of price changes magnifies the effect of skew ness on inflation since a larger variance of shocks leads to more weight in the tails of the distribution. A given skew ness shock then leads to an even greater disparity between the amount of price increases and decreases.

In order to provide empirical evidence for their theory in the U.S., Ball and Mankiw estimate several regressions with the aggregate inflation as the dependent variable. The variables include lagged inflation, standard deviation of relative price changes, skew ness of price changes and the interaction of standard deviation and skew ness. They find that standard deviation and skew ness of relative price changes have statistically significant positive effects on aggregate inflation.

More recently, Balke and Wynne (2000) have questioned this interpretation and have shown that even with fully flexible prices it is possible to have a positive relationship between inflation and RPV/skew ness when price changes are driven by sectoral technology shocks.

2.5.2 Demand Shocks

a. Fiscal policies and inflation

Taking the monetary nature of inflation as a starting point, the theory-based part of the literature investigates the relationship between fiscal policies and monetary policies and the resulting impact on inflation. The question under study is under which conditions fiscal policy considerations could drive monetary policies and, eventually, inflation. One link is through a dependent central bank. If the government has a strong saying in monetary policy, there is a high probability that it will use its power for its own objectives. Thus, the government might simply resort to the central bank to finance deficits directly or it might put pressure on the central bank to keep the interest rate level low and reduce government borrowing costs. Similarly, in conflicts over economic policies strong governments may force the central bank into accommodating their policies (Sargent and Wallace, 1981). But also independent central banks might have an incentive to generate surprise inflation in response to fiscal developments. Similar to the time inconsistency problem applied to the central bank problem by Barro and Gordon (1983), independent central banks may induce higher inflation if they perceive maintaining fiscal sustainability through consolidation as more costly for the economy. Such conflicts could be addressed through adopting a conservative central banker (Rogoff, 1985) or through adopting particular policy rules, e.g., defining inflation as the principal policy objective.

The empirical support for a causal relationship between the level of fiscal deficits and inflation through the monetary channel is somewhat mixed. A range of

studies finds that separating the central bank from the government has indeed resulted in lower inflation rates, thus lending support to the hypothesis that government influence on monetary policy raises inflation. However, other studies (Fuhrer 1997, Campillo and Miron, 1996, also surveying the literature supporting the importance of central bank independence) indicate that the impact of central bank independence declines once other factors are accounted for.

Direct empirical approaches linking the level of government deficits (and debt) to inflation performance also appear to yield strong results only for restricted country samples. For example, while Fischer, Sahay and Vegh (2002) found a strong relation in a broad country sample between fiscal deficits and high inflation; they do not find such a link for low inflation rates. Similarly, Cottarelli et al. (1998) found fiscal deficits on inflation had a significant impact in countries where securities markets are not strongly developed, suggesting that limited access to financial markets drives governments to resort to central banks for financing needs. This interpretation is supported by the findings of Catao and Terrones (2001) who report a strong positive deficit-inflation relationship for a panel of 23 emerging market countries using dynamic panel estimation. Finally, for ten accession countries Arratibel et al. (2002) provide evidence of a significant impact of fiscal deficits on inflation. In this study, the results are derived from a model assuming an independent central bank behaving optimally, which would preclude the central bank channel as the link between the deficit and inflation.

This strand of literature tends to focus on the impact of fiscal policy shocks on inflation and other macroeconomic variables, abstracting from rigid theoretical models. Similar to the longer-term studies, it has generally found only loose relationships between fiscal policy shocks and inflation. The VAR based analyses study the macroeconomic impact of fiscal policies relying only on a limited set of identifying restrictions. For example, Perotti (2002) sets up a VAR for 5 OECD countries to study the impact of fiscal policy on GDP and its components, the price level and the short term interest rate. He finds a small positive impact of fiscal policies on prices about 4 quarters after the shock for all countries excluding the US, while he also points to a relatively large degree of uncertainty around these results. For the four largest euro area countries, also Marcellino (2002) finds a small positive relationship, although differences across countries are large. For the US, Perotti's findings are supported by Fatas and Mihov (2002). Similarly, Mountford and Uhlig (2002) report for the US a weak link between fiscal policies and inflation which depends to a large extent on the respective model specification.

A major issue in such studies is the identification of independent fiscal policy shocks. Four alternative approaches have been applied in the literature. First, fiscal policy shocks can be identified by looking at specific episodes, such as the requirements to finance wars in the US history. The second alternative is to use sign restrictions, identifying fiscal shocks through exogenous assumptions on the co movement of a set of variables (e.g., Mountford and Uhlig (2002)). For example, a positive revenue shock would require an increase in revenues while expenditures

remain constant. Third, researchers have employed Choleski ordering, imposing the restriction that fiscal shocks affect contemporaneously the endogenous macroeconomic variables but not vice versa (e.g. Fatas and Mihov (2002)). The fourth approach, also adopted by Perotti (2002) and Marcellino (2002), consists in exploiting the institutional information and lag structure of fiscal policies. In particular, discretionary fiscal policies take at least one quarter to be implemented so that contemporaneous changes of fiscal and macroeconomic variables can only be the result of automatic reactions. Using estimates of the elasticities of the automatic fiscal reactions then allows deriving the discretionary fiscal shocks.

b. Fiscal theory of the price level

A relatively recent theory suggests an immediate impact of fiscal policies on the price level independent of monetary variables. This fiscal theory of the price level considers the price level as the crucial adjustment variable to ensure the fulfillment of the government's intertemporal budget constraint. This constraint equates in real terms the government's current liabilities to the net present value of government revenues, i.e., future primary surpluses and revenues from money creation. Under the condition that Ricardian equivalence does not hold and with a strongly committed and independent central bank, imbalances in the intertemporal budget constraint need to be adjusted through shifts in the price level. In other words, if future primary surpluses are perceived as insufficient to guarantee fiscal solvency and the central bank will not generate seignior age, balance is achieved through an adjustment in the

price level. The adjustment is driven by a wealth effect. Absent Ricardian behavior, individuals perceive government deficits as increases in wealth which induce them to increase spending, thus driving up the price level. By contrast, with Ricardian equivalence, the wealth effect of deficits would be neutral, leaving the central bank in control of the price level.

Empirical studies regarding the fiscal theory of the price level are scarce and their results are mixed. Studies take the identification of Ricardian v. non-Ricardian behavior as the core prerequisite for the validity of the theory. However, a major obstacle lies in the fact that such behavior can only be identified if the government's intertemporal budget constraint is not balanced, while in practice only the equilibrium realizations of the constraint can be observed. Thus, the studies analyze to what extent observed behavior of fiscal and price variables are in line with the underlying assumptions of the fiscal theory. Using this approach, Canzoneri et al. (2001) concludes that US data is more in line with Ricardian behavior. By contrast, Cochrane (1998) and Woodford (1998) find evidence of non-Ricardian behavior, at least for some periods in the US history. For the EU, Afonso (2002) reports Ricardian government behavior.

c. Monetary Policy and Inflation

In the literature on inflation targeting, many suggestions are given concerning this issue. Several papers have indicated that for open economies, it could be preferable to use domestic inflation as an indicator or target for monetary policy

above CPI inflation. Svensson (1998) illustrates that under a monetary policy regime with a "strict inflation objective", the use of CPI targeting reduces the variance of CPI inflation but increases the variance of other relevant variables (output, domestic price inflation, real exchange rate etc.) compared to a similar policy using domestic inflation as its objective.

The reason for this is that monetary policy, under strict CPI-inflation targeting, relies heavily upon the direct exchange rate channel, and neglects the other exchange rate channels disturbing aggregate demand allocations and domestic output decisions. The use of domestic inflation instead of CPI inflation performs better, as it makes monetary policy less dependent on the short-term exchange rate fluctuations. The inclusion of output variability as a second argument in the objective function also results in a better performance for the variability of other macroeconomic concepts than strict CPI-inflation targeting, as it shifts the emphasis of monetary policy more towards the long-run domestic inflation tendency that is caused by output or capacity utilization. The use of CPI-versus domestic-inflation targeting is also analyzed by Conway et al. (1998) using simulations of the FPS model for New Zealand. They obtain similar conclusions by introducing different inflation concepts in the forward-looking reaction rule of the central bank.

Mayes and Chapple (1995) and Yates (1995) describe how certain shocks that are expected to result in simply temporary price level movements should be extracted out of the inflation measure that is used in the inflation targeting approach. This idea is also present in the theoretical analysis of Goodfriend and King (1997) and of King

and Wolman (1998) where the optimal inflation (or price level) concept for monetary policy is defined as the sticky price component of inflation. The motivation here is that only sticky prices result in a misallocation of demand and supply decisions as marginal costs deviate unnecessarily from marginal benefit in these circumstances, and therefore have a negative effect on welfare. By eliminating any variability in the marginal cost and suppressing any need for changes in the price level, monetary policy can maximize economic welfare of private economic agents.

These examples illustrate the importance of the inflation concept that is central to monetary policy decision making. Svensson (1998) and Goodfriend and King (1997) also discuss the optimal policy reaction on different kinds of shocks. In these sticky price models, demand and supply shocks have similar consequences for monetary policy. In the case of a demand shock, monetary policy should react restrictively, reducing aggregate demand and eliminating inflation pressure coming from increasing marginal costs or higher capacity utilization. That supply shocks should ask for similar reactions is surprising, and, in emphasizing the conflict between the inflation objective and the output objective, conflicts with conventional wisdom. However, when output gap stabilization enters the loss function instead of output stabilization, this conflict disappears. Indeed, a negative supply shock, reducing productivity and increasing marginal costs, increases inflation pressure. A restrictive reaction of monetary policy will decrease this inflation pressure but also aggravate the output reduction.

However, the output reduction should not necessarily be considered as negative in this case: output should follow production capacity, and the result of a restrictive monetary policy reaction implies a minimization of the output gap variance. The minimization of output gap variance or marginal cost stabilization increases the efficiency of production decisions. In this way demand shocks and negative supply shocks have similar implications for monetary policy.

This conclusion contradicts the Quah and Vahey (1999) approach of core inflation: that approach is concentrated on subtracting the inflation component related to permanent output shocks. If this shock is interpreted as a supply shock, it does not seem optimal to exclude its effect from the core inflation measure. In a broader theoretical sticky-price model, both supply and demand shocks can have persistent, but not permanent, effects on inflation, as both work through the capacity gap or the marginal cost channel on prices.

Table 1
Previous Research Results

No	Researcher's Name	Location of Research	Period of Research	The effect of inflation on Stock Returns
1	Boong Soo Lee	US	1926-1994	Negative
		UK		
		Japan		
		Germany		
2	Austin Murphy	US	1957-1995	Negative
	Anandi Sahu			
3	Amihud Yakov	Israeli	1986-1991	Negative
4	David P. Elly	US-Canada	1950-1986	Negative

		French		
		Italia		
		Germany		
5	David Louton	US	1952-1992	Negative
	John Gilser			
6	Jacob Boudoukh	US	1802-1990	Positive
	Matthew Richardson	UK		
7	S. Titman	US	1979-1982	Positive
	Arthur Warga			
8	Kwangwoo Park	US	1955-1998	Negative
	Ronald A. Ratti			
9	Patrick J. Hess	UK	1961-1994	Negative
	Bong-Soo Lee	US	1947-1994	
10	Bahram Adrangi	Korea	1978-1996	Negative
	Arjun Chatrath	Mexico	1985-1995	Negative
	Kambiz Raffiee			
11	Bahram Adrangi	Peru	1990-1996	Negative
	Arjun Chatrath	Chilie	1985-1995	Negative
	Todd M. Shank			
12	Osamah M. Al Khazali	Pacific Basin	1980-2001	Negative
	Choong Soo Pyun			

2.6 Hypothesis Formulation

Previous studies show that the effect of inflation on stock returns varies over time and across countries, depending on the relative's importance of two types of shocks, Supply shocks and Demand shocks. In relation to these studies, that are mixed and problematic, the researcher would like to focus on the two types of shocks due to the influence of inflation on stock price in Indonesia.

According to the Tax Effect Hypothesis, stock prices fail to keep pace with inflation because inflation increases corporate tax liabilities and thus reduces after-tax earnings. Here, inflation can be said, in an economic sense, to "cause"-or more precisely to temporally precede-movements in stock prices. This hypothesis focuses on the treatment of depreciation and the valuation of inventories in a period of inflation.

Another hypothesis, Proxy Effect Hypothesis argues that there is a negative relationship between stock returns and inflation, the hypothesis predicts that rising inflation rates reduces real economic activity and the demand for money. A reduction in economic activity negatively affects company's future profits and stock prices. This hypothesis involves two assumptions, one that cyclical variations in output and earnings growth are positively correlated, and the other that monetary policy is countercyclical.

Based on the previous studies regarding this issue, the researcher try to formulate a hypothesis focusing on the correlation between inflation and stock price:

H_A: The effect of inflation on stock price with the batteries of macroeconomics in manufacturing companies is Negative.

CHAPTER III

RESEARCH METHOD

3.1 Population and Sample

The populations in this research are the manufacturing companies listed in Jakarta Stock Exchange (JSE) from 1996-2004. Data used in this research are secondary data by choosing samples based on the *purposive sampling* method, with judgment sampling type that selects the samples based on certain criteria (Emory and Cooper, 1995: 228) as quoted by Hamidi, 2003. The sample selections are based on following criteria:

1. All Manufacturing companies listed on JSE from 1996-2004.
2. Each of the companies should report the stock price data.

The setting of this research is at Jakarta Stock Exchange corner in Universitas Islam Indonesia as the representative of the JSE corner which includes serving the financial statement data and also gives all information needed during the research period.

3.2 Research Variables

3.2.1 Stock Price

The expected return from holding a security is expressed in nominal terms; that is the cash inflows received, in certain currency at the time of

receipt. The simple or fundamental model of stock price determination describes how prices are determined in a stock market. According to this model, in an efficient market, stock prices reflect the current market value of expected future dividends or income stream, which depends on the expected profit. More broadly, the price of a firm's stock depends on the current market value of both its expected dividend and resale price.

The fundamental model of a stock price is based on the assumption that the stock return is equal to stock price at time t, deducted by the stock price at t-1 (the previous year), and divided by the stock price at t-1. The current price of a stock is therefore given as:

$$\mathbf{Rt} = \frac{\mathbf{P_t - P_{t-1}}}{\mathbf{P_{t-1}}}$$

3.2.2 Inflation

Rising inflation rates reduce real economic activity and the demand for money. A reduction in economic activity negatively affects a company's future profits and stock prices. The inflation Rate used in this study is calculated as percentage changes in composite consumer price indices from the year 1996-2004. The price index is a weighted average of the prices of a number of goods and services. While the Customer Price Index (CPI) measure the cost of buying a standard basket of goods at different times. The Inflation rate is therefore given as:

$$\text{Rate of Inflation (INF)} = \frac{\text{Price Level (year t)} - \text{Price Level (year t-1)}}{\text{Price Level (year t-1)}} \times 100$$

3.2.3 Control Variables

Control variables are defined as independent variables that might affect dependent variable, but not independent variables focused by the researcher. There are several control variables in this research, i.e., Nominal Interest Rate, Financial Deficit, Money Supply, Oil Price Volatility, Gross Domestic Product (GDP) and Financial Deregulation as a Dummy Variable.

Nominal interest rate, which is the interest rate normally, observed in financial markets, is composed of a real component that reflects inflationary expectation. That is, nominal interest is equal to expected real rate (r) plus expected inflation. In the long-term, the real interest rate is an equilibrium rate and therefore constant, thus in this equilibrium situation any changes in the nominal rate is largely due to changes in inflation expectation.

Deficits measure here; use two measurements, total deficits and active deficits. More precisely, the deficit here measures the government expenditure that overstates the income. Tax is one of the sources of government revenue. If tax contributes significantly to the government income, it indicates good performance of the company, since the taxable income of the company is increase.

Money Growth is defined as cartel money (currency) plus demand deposit. Surplus in Supply of money leads the bank increase the interest rate, to encourage

people to save their money in the bank, on the other side, an increase in interest rate will also result on an increase in the cost of borrowing money.

Oil Price Volatility reflects the price fluctuation over period of time obtained from OPEC bulletin. The oil price volatility will increase the risk of holding stock, since it will induce the increasing of expenses for the company operation, that consequently will reduce profit, which the main driver of stock price.

Gross Domestic Product measures total market value of final goods and services produced during a year. GDP indicates level of consumption, investment, and overall growth of economy, therefore, an increase in GDP will accelerate the performance of a company, hence will increase the stock price.

GDP = C + I + G +(x-m)

C = Consumption
I = investment
G = Government Expenditure
(x-m) = export-import

3.3 Operational Hypothesis

Based on the theoretical framework and hypothesis formulation in chapter 2, a hypothesis is resulted for the purpose of the study in order to give empirical evidence to the problems.

H_O: The effect of inflation on stock price with the batteries of macroeconomics in manufacturing companies is not negative.

H_A: The effect of inflation on stock price with the batteries of macroeconomics in manufacturing companies is Negative.

3.4 Statistical Tools

I propose the following empirical model for the determination of Stock Prices to anticipate changes in Inflation and a battery of other macroeconomic variables: interest rate, GDP, money growth, long-term interest rate, oil price variability, financial deficits, and financial deregulation.

$$\mathbf{SR_t = b_0 + b_1\ INF_t + b_2\ GDP_t + b_3\ MI_t + b_4\ INT_t + b_5\ OPV_t + b_6\ F_0D + b_7\ DEF_t + e}$$

Where:

SP = stock return

INF = inflation rate

GDP = gross domestic product

MI = monetary stock narrowly defined

INT = long-term rate of interest

OPV = Oil Price Volatility

DEF = deficits measure; Financial Deficit

FDD = financial deregulation dummy; it takes the value one for years of deregulation, and zero otherwise

e = error term

t = time

The prior signs of the coefficient are:

$b_2, b_3\ b_6\ b_7 > 0$

$b_1, b_4\ b_5 \quad < 0$

The fundamental proposition of this paper is that inflation, through its effect on real output growth and interest rates will have a negative impact on stock prices. Therefore, it is expected that the estimated value of b_2 will be negative. If interest rate changes influence prices as hypothesized, the estimated value of b_4 will also be negative. In the case of the control variables, GDP, MI, OPV, FDD and DEF, it is expected that they will individually exert strong positive effects on stock prices. An increase in output growth (GDP) will, through its positive effect on stock returns and therefore earnings per share (EPS), increase stock prices. That is, ceteris paribus, increase in GDP is expected to increase the firms' profitability and therefore the firms' stock prices. Thus, the estimated value of b_2 is expected to be strongly positive. It is expected that a change in MI will boost stock price by depressing interest rate. It is also hypothesized that fiscal deficit (DEF), and particularly the structural component of deficit, will have an ambiguously positive effect on stock prices. It is expected that OPV will increase the stock market risk through its adverse effects on the economy: government revenue and budget, imports, exports, and exchange rates. The estimated value of b_5 is therefore expected to be negative. Finally, the financial deregulation is expected to increase the volume of activities and

the liquidity of the stock market. This suggests that the estimated coefficient on the variable FDD, b_6, will have a positive sign.

CHAPTER IV

RESEARCH FINDING, DISCUSSION and IMPLICATIONS

4.1 Sample Selection

The number of samples found from all manufacturing companies listed on Jakarta Stock Exchange during 1996 until 2004 after selected using several criteria stated in the chapter III were described as follows:

1. The number of manufacturing companies listed on Jakarta Stock Exchange was 165.
2. The number of companies excluded because of the unavailable data required in chapter III and because they were not included as manufacturing companies were 30 companies. Then, the final samples used were 135 companies **(appendix 1)**, which consisted of 1215 firm-years **(appendix 2)**.

The interest rate data were obtained from the Central Bank of Indonesia with one month tenor **(appendix 3)**. GDP, Money Supply, Oil Price Volatility, Financial Deficit, and Financial Deregulation were obtained from *the Economics Statistics*, *the Indonesian Finance*, the Annual year report issued by the Central Bank of Indonesia (BI), the Capital Market directory, the Jakarta Composite Index, the Statistical Bureau Center (BPS), the OPEC Bulletin, and the Jakarta Stock Exchange (JSE) directory **(appendix 4)**.

4.2 Descriptive Statistics

Table 2
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SR	1080	-0.988505747	47.33333333	0.295257451	2.000236782
INF	1080	0.0201	0.7763	0.1676	0.232418522
LNGDP	1080	34.07307613	35.37300278	34.86899367	0.407838971
IR	1080	0.071492	0.493242	0.18508745	0.124257314
LDFD	1080	29.65028793	31.33195265	30.77675675	0.546818463
LNMS	1080	31.84377771	33.08237998	32.52344259	0.36851652
LNOP	1080	10.90113939	12.68384853	12.07872807	0.531454791
FR	1080	0	1	0.625	0.484347205
Valid N	1080				

Note: Stock Price (SR); Inflation (INF); Gross Domestic Product (GDP); Interest Rate (IR); Financial Deficit (FD); Money Supply (MS); Oil Price (OP); Financial Deregulation (FR)

Based on the table above, together with 1080 data tested, the mean of the stock price and inflation of manufacturing companies in the period of 1996 – 2004 are 0.2953 and 0.1676 with standard deviation 2.0002 and 0.23241 respectively.

4.3. Classical Assumption

The Classical Assumption states that the outlier data, an observation that much different in relation to the observation in the sample, can be appeared when there is an extreme data either very high or very low. The possible reason of this problem was the economic condition of Indonesia in which during 1997-1998 Indonesia was in crisis economy. The outlier data is detected by using cook's distance and considered extreme when the amount of cook's distance is 2.5 or more.

The disturbance of the regression should be homoscedastik, in which all disturbances have the same variance. In case that the disturbance variance is not the same, it is called as a heteroscedasticity. One of the methods to eliminate the heteroscedasticity problem is by using White's General Heteroscedasticity test from a certain regression in E-views.

The other Classical Assumption is multicolinearity and autocorrelation. Multicolinearity is appeared when there is a strong relationship among independent variables. One of the methods to detect Multicolinearity is looking on the Variance Inflated Factors (VIF). If VIF is more than 5.00, meaning that the model has a Multicolinearity problem. To eliminate the problem of Multicolinearity is by simply exclude the variable that has a strong relationship to other variable.

Autocorrelation occurred when the disturbance toward an individual or group tend to influence the disturbance of the next period for the same individual or group. One method to detect autocorrelation problem is by using Durbin-Watson (d Test) measured by the d-value (DW), *dU*, *dL* or LM method. The researcher did not found any problem related with the classical assumption that might mislead the interpretation of the regression results.

4.4 Results and Implications

The table below shows the regression result between dependent variable (stock price) with other independent variable. The result shows that the coefficient of INF (b_1) was negative (-16.580) with 0.000 significant level, which is consistent with

the prediction that the increase of inflation cause a decline on stock price, and vice versa. Thus, the researcher rejects the null hypothesis.

Table 3
Coefficients (a)

Model		Un standardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-190.657	29.285		-6.510	.000	-248.119	-133.195
	INF	-16.580	2.018	-1.926	-8.214	.000	-20.540	-12.619
	LNGDP	7.556	1.964	1.541	3.848	.000	3.703	11.410
	IR	35.178	4.567	2.185	7.703	.000	26.216	44.139
	LDFD	-2.590	.595	-.708	-4.351	.000	-3.758	-1.422
	LNMS	1.355	.769	.250	1.762	.078	-.154	2.863
	LNOP	-3.343	.659	-.888	-5.069	.000	-4.637	-2.049
	FR	-.341	.203	-.082	-1.676	.094	-.739	.058

a. Dependent Variable: SR

The primary focus of this study is on the influence of inflation on stock price in Indonesia. The empirical evidence provides a strong support for the researcher's proposition that inflation exerts significant measure of negative influence on the Jakarta Stock Exchange. The major thrust of this hypothesis is that inflation has strong negative impact on firm's productivity and therefore corporate profits. Thus, since stock prices are highly sensitive to corporate profits, any anticipated inflation would, through its negative effects on corporate earning depress stock prices. The evidence suggests that at 1 per cent increase in inflation rate would depress stock prices by about 16,580 per cent.

The coefficient estimates on the remaining six variables (control variables) suggest several other references. As already indicated, this result is accordance with

the previous study, in which the coefficient of the GDP (b_2) with 95% confidence interval is positive (7.556) and statistically significant at 0,000 level. The coefficient of the Money Supply (b_3) is positive (1.355) and insignificant at 0,078 level. This implies that money growth has a weak positive correlation on stock prices. This result supports the previous study, in which Money Supply has a positive correlation with the stock price, even though it is not significant.

The coefficient of the Interest Rate (b_4) is positive (35.178) and significant at 0,000 level. This implies that the interest rate has a strong positive correlation on stock prices. This result is surprising, because the previous study shown that interest rate has a negative correlation with the stock price. As already predicted, the coefficient of the Oil Price (b_5) is negative (-3,343) and significant at 0,000 level. This implies that the oil price has a strong negative correlation on stock prices. It confirmed the previous study, and the proposition in this research.

The coefficient on the Financial Deregulation (b_6) is negative (-0,341) and insignificant at 0,094 level. This implies that the financial deregulation has a weak negative correlation on stock prices. Last, the coefficient on the Financial Deficit (b_7) is negative (-2.590) and significant at 0,000 level. This implies that the financial deficit has a strong negative correlation on stock prices. Both financial deregulation and financial deficits are not in accordance with the previous research, that shown a positive correlation.

The coefficient of determination (R Square) shows the value of 15.4%, meaning that only 15.4% of the total variation in stock price can be explained by

inflation, GDP, interest rate, financial deficit, money supply, oil price and financial deregulation. The 14.80% of an adjusted coefficient of determination (adjusted R square) reflect the total fluctuation in stock price can be explained by the inflation, GDP, interest rate, financial deficit, money supply, oil price and financial deregulation after adjusting for the number of explanatory variables and the sample size. In the other word the rest 85.20% of factor influencing the stock price is determined by other factor. This result has a slight different with the regression coefficients that mostly shows the significant influence to the stock price.

Although some of the control variable tested, such as interest rate, financial deregulation and financial deficit are not support the previous study, overall, the researcher is success to prove the hypothesis formulated in the previous chapter. In accord with the previous study, the researcher also found himself success to prove the negative influence of inflation on stock price.

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

In this research, an attempt is made to examine the effect on stock prices of the persisting high and virulent inflation in Indonesia. The estimation results provide strong support for the researcher that inflation would exert a significant measure of negative impact on the Indonesian stock market. In relation to the objective of this research, the stock prices of manufacturing companies in Indonesia have a different direction with inflation rate of Indonesia at the research period. On the other word, they have a negative correlation in which every increase of the inflation will cause a decline of the stock price.

GDP, Oil Price, and Money supply give a strong support to the previous study (Ralph Udegbunam; Eriki; Kaul; Fama). The researcher proves that GDP and Money supply show a positive correlation to the stock price, whereas Oil price exerts negative correlation. Financial deficits show negative correlation to the stock price and it statistically significant. At the same time financial deregulation also show a negative correlation but it statistically insignificant. Both financial deregulation and financial deficits are not in accordance with the previous research, that shown a positive correlation. Another remarkable finding is that the interest rate shows a

positive correlation with the stock price. The result is not support the previous study (Fama; Kaul) that proves a negative correlation between interest rate and stock price.

5.2 Recommendation

The research is limited by its focus on the influence of inflation on stock price of manufacturing companies in Indonesia, and the result shows that most of the external control variable used in this research seemed to have significant correlation. It is recommended for the future research to have both internal and external control variable, in order to have a comprehensive results of factors that influence the stock price movements. Hence, it is also recommended that the future research to have a sample that is not limited by only the manufacturing companies, but also the non-manufacturing companies and the banking industries, so that the results will be more reliable explaining the condition of Indonesian stock market.

The research is also limited to the companies listed on Jakarta Stock Exchange in the period of 1996 – 2004, in which the period of this research is also influenced by great economic crisis with a high rate of inflation in Indonesia that affect the implication of the results. Therefore, it is suggested the future research to conduct a research for the period before and after the crisis to make a comparison whether or not the result is similar between those two different periods of examination.

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APPENDICES

Appendix 1: List of the company

NO	COMPANY	CODE
1	PT ADES ALFINDO	ADES
2	GT PETROCEM INDUSTRIES TBK	ADMG
3	PT ASIA INTISELERA TBK	AISA
4	PT ARGHA KARYA PRIMA INDUSTRY	AKPI
5	PT ANEKA KIMIA RAYA TBK	AKRA
6	PT ALUMINDO PERKASA	ALKA
7	PT ALUMINDO LIGHT METAL INDUSTRY TBK	ALMI
8	ASAHIMAS FLAT GLASS	AMFG
9	PT AQUA GOLDEN MISSISSIPPI TBK	AQUA
10	PT ARGO PANTES	ARGO
11	ASTRA GRAPHIA TBK	ASGR
12	PT ASTRA INTERNATIONAL TBK	ASII
13	PT ASTRA OTOPARTS TBK	AUTO
14	PT SEPATU BATA	BATA
15	PT BAT INDONESIA TBK	BATI
16	PT PRIMARINDO ASIA INFRASTRUCTURE TBK	BIMA
17	PT BRANTA MULIA	BRAM
18	PT BERLINA TBK	BRNA
19	PT BARITO PASIFIC TIMBER TBK	BRPT
20	PT BUDI ACID JAYA	BUDI
21	BAYER INDONESIA	BYSP
22	PT CAHAYA KALBAR TBK	CEKA
23	PT CENTURY TEXTILE INDUSTRY (CENTEX)	CNTX
24	PT CITRA TUBINDO TBK	CTBN
25	PT DAVOMAS ABADI TBK	DAVO
26	PT DELTA DJAKARTA	DLTA
27	PT DANKOS LABORATORIES	DNKS
28	PT DUTA PERTIWI NUSANTARA TBK	DPNS
29	PT DAYA SAKTI UNGGUL CORP. TBK	DSUC
30	PT DUTA PERTIWI TBK	DUTI
31	PT DARYA-VARIA LABORATORIA TBK	DVLA
32	PT DYNAPLAST TBK	DYNA
33	PT EKADHARMA TAPE INDUSTRIES	EKAD
34	PT ERATEX DJAJA LTD. TBK	ERTX
35	PT EVER SHINE TEXTILE INDUSTRY TBK	ESTI
36	PT ETERINDO WAHANATAMA TBK	ETWA
37	PT FAST FOOD INDONESIA TBK	FAST
38	PT FAJAR SURYA WISESA TBK	FASW
39	PT GANDA WANGSA UTAMA TBK	GDWU
40	PT GOOD YEAR INDONESIA TBK	GDYR
41	PT GUDANG GARAM TBK	GGRM
42	PT GADJAH TUNGGAL TBK	GJTL

43	PT GREAT RIVER INTERNATIONAL TBK	GRIV
44	PT PANASIA INDOSYNTEC TBK	HDTX
45	PT HEXINDO ADIPERKASA TBK	HEXA
46	PT HANJAYA MANDALA SAMPOERNA TBK	HMSP
47	PT IGAR JAYA TBK	IGAR
48	PT INTIKERAMIK ALAMASRI INDUSTRI TBK	IKAI
49	PT SUMI INDO KABEL TBK	IKBI
50	PT INDOMOBIL SUKSES INTERNATIONAL TBK	IMAS
51	PT INDAL ALUMINIUM INDUSTRY TBK	INAI
52	PT INTAN WIJAYA CHEMICAL IND. TBK	INCI
53	PT INDOFOOD SUKSES MAKMUR TBK	INDF
54	PT INDOSPRING	INDS
55	PT INDAH KIAT PULP & PAPER TBK	INKP
56	PT INTRACO PENTA TBK	INTA
57	PT INTER DELTA TBK	INTD
58	PT INDOCEMENT TUNGGAL PRAKARSA TBK	INTP
59	PT JEMBO CABLE COMPANYTBK	JECC
60	PT JAKARTA KYOEI STEEL WORKS LIMITED TBK	JKSW
61	PT JAYA PARI STEEL CORP. LTD. TBK	JPRS
62	PT KARWELL INDONESIA TBK	KARW
63	PT GT KABEL INDONESIA TBK	KBLI
64	PT KABELINDO MURNI TBK	KBLM
65	PT KEDAWUNG SETIA INDUSTRIAL LTD. TBK	KDSI
66	PT KERAMIKA INDONESIA TBK	KIAS
67	PT KEDAUNG INDAH CAN	KICI
68	PT KURNIA KAPUAS UTAMA TBK	KKGI
69	PT KALBE FARMA TBK	KLBF
70	PT KOMATSU INDONESIA TBK	KOMI
71	PT PERDANA BANGUN PUSAKA TBK	KONI
72	PT LION METAL WORKS TBK	LION
73	PT LANGGENG MAKMUR PLASTIC INDUSTRY LTD	LMPI
74	PT LIONMESH PRIMA TBK	LMSH
75	PT LIPPO ENTERPRISES TBK	LPIN
76	PT LAUTAN LUAS TBK	LTLS
77	PT MODERN PHOTO FILM COMPANY TBK	MDRN
78	PT MERCK INDONESIA TBK	MERK
79	PT MULTI BINTANG INDONESIA	MLBI
80	PT MULTIPOLAR CORPORATION	MLPL
81	PT MUSTIKA RATU TBK	MRAT
82	PT METRODATA ELECTRONICS TBK	MTDL
83	PT MIWON INDONESIA	MWON
84	PT MAYORA INDAH	MYOR
85	PT HANSON INDUSTRI UTAMA TBK	MYRX
86	PT APAC CENTERTEX CORPORATION TBK	MYTX
87	PT NIPRESS	NIPS

88	PT PANASIA FILAMENT INTI TBK	PAFI
89	PT PAN BROTHER TEX TBK	PBRX
90	PT PROCTER & GAMBLE INDONESIA TBK	PGIN
91	PT PELANGI INDAH CANINDO TBK	PICO
92	PT POLYSINDO EKA PERKASA TBK	POLY
93	PT PRIMA ALLOY STEEL UNIVERSAL	PRAS
94	PT PRASHIDA ANEKA NIAGA TBK	PSDN
95	PT PUTRA SEJAHTERA PIONEERINDO TBK	PTSP
96	PT RODA VIVATEX TBK	RDTX
97	PT RICKY PUTRA GLOBALINDO TBK	RICY
98	PT SURABAYA AGUNG INDUSTRI PULP	SAIP
99	PT SUPREME CABLE MANUFACTURING CORP.	SCCO
100	PT SCHERING-PLOUGH INDONESIA	SCPI
101	PT SARI HUSADA TBK	SHDA
102	PT VAN DER HORST INDONESIA TBK	SIMA
103	PT SIERAD PRODUCE TBK	SIPD
104	PT SEKAR LAUT	SKLT
105	PT SMART CORPORATION TBK	SMAR
106	PT SEMEN CIBINONG	SMCB
107	PT SEMEN GRESIK (PERSERO) TBK	SMGR
108	PT SELAMAT SEMPURNA TBK	SMSM
109	PT SORINI CORPORATION TBK	SOBI
110	PT SUPARMA TBK	SPMA
111	PT SQUIBB INDONESIA TBK	SQBI
112	PT SARASA NUGRAHA TBK	SRSN
113	PT SUNSON TEXTILE MANUFACTURER TBK	SSTM
114	PT SIANTAR TOP TBK	STTP
115	PT SUBA INDAH TBK	SUBA
116	PT SURYA DUMAI INDUSTRI TBK	SUDI
117	PT SUMALINDO LESTARI JAYA TBK	SULI
118	PT TEMBAGA MULIA SEMANAN TBK	TBMS
119	PT TANCHO INDONESIA TBK	TCID
120	PT TEXMACO JAYA TBK	TEJA
121	PT TIFICO TBK (TEIJIN INDONESIA FIBER CORP.)	TFCO
122	PT TIRA AUSTENITE TBK	TIRA
123	PT SURYA TOTO INDONESIA TBK	TOTO
124	PT TEXMACO PERKASA ENGINEERING TBK	TPEN
125	PT TRI POLYTA INDONESIA TBK	TPIA
126	PT TRAFINDO PERKASA TBK	TRPK
127	PT TRIAS SENTOSA TBK	TRST
128	PT TEMPO SCAN PACIFIC TBK	TSPC
129	PT TUNAS RIDEAN TBK	TURI
130	PT WAHANA JAYA PERKASA TBK	UGAR
131	PT ULTRA JAYA MILK TBK	ULTJ
132	PT UNGGUL INDAH CAHAYA TBK	UNIC

133	PT UNITED TRACTORS TBK	UNTR
134	PT UNILEVER INDONESIA TBK	UNVR
135	PT VOKSEL ELEKTRIC TBK	VOKS

Appendix 2: Company Stock Price Year 1996-2004

NO	COMPANY	CODE	YEAR	STOCK PRICE
1	PT ADES ALFINDO	ADES	1996	Rp1.000
		ADES	1997	Rp650
		ADES	1998	Rp400
		ADES	1999	Rp1.025
		ADES	2000	Rp2.300
		ADES	2001	Rp1.125
		ADES	2002	Rp800
		ADES	2003	Rp1.025
		ADES	2004	Rp2.275
2	GT PETROCEM INDUSTRIES TBK	ADMG	1996	Rp1.075
		ADMG	1997	Rp375
		ADMG	1998	Rp150
		ADMG	1999	Rp700
		ADMG	2000	Rp190
		ADMG	2001	Rp120
		ADMG	2002	Rp110
		ADMG	2003	Rp375
		ADMG	2004	Rp345
3	PT ASIA INTISELERA TBK	AISA	1996	Rp200
		AISA	1997	Rp200
		AISA	1998	Rp175
		AISA	1999	Rp400
		AISA	2000	Rp300
		AISA	2001	Rp160
		AISA	2002	Rp330
		AISA	2003	Rp225
		AISA	2004	Rp210
4	PT ARGHA KARYA PRIMA INDUSTRY	AKPI	1996	Rp3.400
		AKPI	1997	Rp1.000
		AKPI	1998	Rp175
		AKPI	1999	Rp825
		AKPI	2000	Rp250
		AKPI	2001	Rp190
		AKPI	2002	Rp160
		AKPI	2003	Rp700
		AKPI	2004	Rp450
5	PT ANEKA KIMIA RAYA TBK	AKRA	1996	Rp1.400
	wholesale	AKRA	1997	Rp1.200
		AKRA	1998	Rp200
		AKRA	1999	Rp550
		AKRA	2000	Rp260
		AKRA	2001	Rp625

		AKRA	2002	Rp600
		AKRA	2003	Rp900
		AKRA	2004	Rp1.150
6	PT ALUMINDO PERKASA	ALKA	1996	Rp800
	(Alakasa Industrindo Tbk)	ALKA	1997	Rp250
		ALKA	1998	Rp125
		ALKA	1999	Rp600
		ALKA	2000	Rp425
		ALKA	2001	Rp550
		ALKA	2002	Rp100
		ALKA	2003	Rp170
		ALKA	2004	Rp165
7	PT ALUMINDO LIGHT METAL INDUSTRY TBK	ALMI	1996	Rp1.075
		ALMI	1997	Rp350
		ALMI	1998	Rp325
		ALMI	1999	Rp1.300
		ALMI	2000	Rp875
		ALMI	2001	Rp495
		ALMI	2002	Rp195
		ALMI	2003	Rp215
		ALMI	2004	Rp445
8	ASAHIMAS FLAT GLASS	AMFG	1996	Rp1.450
		AMFG	1997	Rp325
		AMFG	1998	Rp525
		AMFG	1999	Rp1.150
		AMFG	2000	Rp700
		AMFG	2001	Rp1.250
		AMFG	2002	Rp1.325
		AMFG	2003	Rp1.975
		AMFG	2004	Rp2.150
9	PT AQUA GOLDEN MISSISSIPPI TBK	AQUA	1996	Rp2.300
		AQUA	1997	Rp3.225
		AQUA	1998	Rp2.700
		AQUA	1999	Rp8.000
		AQUA	2000	Rp14.000
		AQUA	2001	Rp35.000
		AQUA	2002	Rp37.500
		AQUA	2003	Rp47.800
		AQUA	2004	Rp48.000
10	PT ARGO PANTES	ARGO	1996	Rp1.625
		ARGO	1997	Rp1.150
		ARGO	1998	Rp625
		ARGO	1999	Rp1.225
		ARGO	2000	Rp1.400

		ARGO	2001	Rp900
		ARGO	2002	Rp700
		ARGO	2003	Rp1.300
		ARGO	2004	Rp1.325
11	ASTRA GRAPHIA TBK			
	computer n service	ASGR	1996	Rp2.750
		ASGR	1997	Rp650
		ASGR	1998	Rp725
		ASGR	1999	Rp725
		ASGR	2000	Rp420
		ASGR	2001	Rp360
		ASGR	2002	Rp275
		ASGR	2003	Rp330
		ASGR	2004	Rp320
12	PT ASTRA INTERNATIONAL TBK			
		ASII	1996	Rp5.275
		ASII	1997	Rp1.425
		ASII	1998	Rp1.000
		ASII	1999	Rp3.750
		ASII	2000	Rp2.000
		ASII	2001	Rp1.950
		ASII	2002	Rp3.150
		ASII	2003	Rp5.000
		ASII	2004	Rp9.600
13	PT ASTRA OTOPARTS TBK			
		AUTO	1996	Rp375
		AUTO	1997	Rp375
		AUTO	1998	Rp375
		AUTO	1999	Rp2.150
		AUTO	2000	Rp1.825
		AUTO	2001	Rp1.225
		AUTO	2002	Rp1.400
		AUTO	2003	Rp1.550
		AUTO	2004	Rp1.925
14	PT SEPATU BATA			
		BATA	1996	Rp2.650
		BATA	1997	Rp1.100
		BATA	1998	Rp1.300
		BATA	1999	Rp13.550
		BATA	2000	Rp12.200
		BATA	2001	Rp14.000
		BATA	2002	Rp15.000
		BATA	2003	Rp14.100
		BATA	2004	Rp14.000
15	PT BAT INDONESIA TBK			
		BATI	1996	Rp15.250
		BATI	1997	Rp26.000
		BATI	1998	Rp15.000
		BATI	1999	Rp57.000

		BATI	2000	Rp12.100
		BATI	2001	Rp6.300
		BATI	2002	Rp8.250
		BATI	2003	Rp8.100
		BATI	2004	Rp9.000
16	PT PRIMARINDO ASIA INFRASTRUCTURE TBK			
	(PT Bintang Kharisma Tbk)	BIMA	1996	Rp2.600
		BIMA	1997	Rp1.500
		BIMA	1998	Rp1.325
		BIMA	1999	Rp1.550
		BIMA	2000	Rp1.500
		BIMA	2001	Rp1.500
		BIMA	2002	Rp1.175
		BIMA	2003	Rp1.175
		BIMA	2004	Rp1.175
17	PT BRANTA MULIA			
		BRAM	1996	Rp2.600
		BRAM	1997	Rp700
		BRAM	1998	Rp200
		BRAM	1999	Rp1.500
		BRAM	2000	Rp650
		BRAM	2001	Rp525
		BRAM	2002	Rp450
		BRAM	2003	Rp950
		BRAM	2004	Rp800
18	PT BERLINA TBK			
		BRNA	1996	Rp1.300
		BRNA	1997	Rp875
		BRNA	1998	Rp300
		BRNA	1999	Rp1.350
		BRNA	2000	Rp1.025
		BRNA	2001	Rp975
		BRNA	2002	Rp1.375
		BRNA	2003	Rp1.600
		BRNA	2004	Rp1.475
19	PT BARITO PASIFIC TIMBER TBK			
		BRPT	1996	Rp1.450
		BRPT	1997	Rp1.575
		BRPT	1998	Rp350
		BRPT	1999	Rp625
		BRPT	2000	Rp130
		BRPT	2001	Rp50
		BRPT	2002	Rp90
		BRPT	2003	Rp270
		BRPT	2004	Rp450
20	PT BUDI ACID JAYA			
		BUDI	1996	Rp3.000
		BUDI	1997	Rp3.000
		BUDI	1998	Rp675

		BUDI	1999	Rp675
		BUDI	2000	Rp400
		BUDI	2001	Rp110
		BUDI	2002	Rp105
		BUDI	2003	Rp100
		BUDI	2004	Rp110
21	BAYER INDONESIA	BYSP	1996	Rp1.900
		BYSP	1997	Rp1.800
		BYSP	1998	Rp1.850
		BYSP	1999	Rp7.000
		BYSP	2000	Rp4.300
		BYSP	2001	Rp3.400
		BYSP	2002	Rp4.100
		BYSP	2003	Rp8.000
		BYSP	2004	Rp6.800
22	PT CAHAYA KALBAR TBK	CEKA	1996	Rp2.350
		CEKA	1997	Rp1.500
		CEKA	1998	Rp1.950
		CEKA	1999	Rp1.075
		CEKA	2000	Rp270
		CEKA	2001	Rp160
		CEKA	2002	Rp235
		CEKA	2003	Rp225
		CEKA	2004	Rp300
23	PT CENTURY TEXTILE INDUSTRY (CENTEX)	CNTX	1996	Rp1.325
		CNTX	1997	Rp1.150
		CNTX	1998	Rp3.500
		CNTX	1999	Rp6.500
		CNTX	2000	Rp6.500
		CNTX	2001	Rp5.000
		CNTX	2002	Rp4.900
		CNTX	2003	Rp4.500
		CNTX	2004	Rp4.700
24	PT CITRA TUBINDO TBK	CTBN	1996	Rp3.850
		CTBN	1997	Rp5.500
		CTBN	1998	Rp21.500
		CTBN	1999	Rp14.200
		CTBN	2000	Rp9.600
		CTBN	2001	Rp7.900
		CTBN	2002	Rp8.000
		CTBN	2003	Rp8.000
		CTBN	2004	Rp8.000
25	PT DAVOMAS ABADI TBK	DAVO	1996	Rp2.125
		DAVO	1997	Rp1.000

		DAVO	1998	Rp400
		DAVO	1999	Rp675
		DAVO	2000	Rp285
		DAVO	2001	Rp525
		DAVO	2002	Rp90
		DAVO	2003	Rp410
		DAVO	2004	Rp200
26	PT DELTA DJAKARTA	DLTA	1996	Rp11.000
		DLTA	1997	Rp10.000
		DLTA	1998	Rp2.000
		DLTA	1999	Rp9.900
		DLTA	2000	Rp7.400
		DLTA	2001	Rp7.600
		DLTA	2002	Rp8.200
		DLTA	2003	Rp8.700
		DLTA	2004	Rp14.500
27	PT DANKOS LABORATORIES	DNKS	1996	Rp1.850
		DNKS	1997	Rp1.250
		DNKS	1998	Rp250
		DNKS	1999	Rp1.300
		DNKS	2000	Rp550
		DNKS	2001	Rp460
		DNKS	2002	Rp400
		DNKS	2003	Rp1.225
		DNKS	2004	Rp775
28	PT DUTA PERTIWI NUSANTARA TBK	DPNS	1996	Rp750
		DPNS	1997	Rp200
		DPNS	1998	Rp475
		DPNS	1999	Rp1.400
		DPNS	2000	Rp575
		DPNS	2001	Rp255
		DPNS	2002	Rp325
		DPNS	2003	Rp235
		DPNS	2004	Rp1.000
29	PT DAYA SAKTI UNGGUL CORP. TBK	DSUC	1996	Rp950
		DSUC	1997	Rp475
		DSUC	1998	Rp675
		DSUC	1999	Rp625
		DSUC	2000	Rp250
		DSUC	2001	Rp125
		DSUC	2002	Rp120
		DSUC	2003	Rp75
		DSUC	2004	Rp335
30	PT DUTA PERTIWI TBK	DUTI	1996	Rp1.875

		DUTI	1997	Rp200
		DUTI	1998	Rp175
		DUTI	1999	Rp1.400
		DUTI	2000	Rp550
		DUTI	2001	Rp255
		DUTI	2002	Rp325
		DUTI	2003	Rp825
		DUTI	2004	Rp800
31	PT DARYA-VARIA LABORATORIA TBK	DVLA	1996	Rp3.800
		DVLA	1997	Rp450
		DVLA	1998	Rp275
		DVLA	1999	Rp1.825
		DVLA	2000	Rp525
		DVLA	2001	Rp435
		DVLA	2002	Rp460
		DVLA	2003	Rp775
		DVLA	2004	Rp700
32	PT DYNAPLAST TBK	DYNA	1996	Rp2.200
		DYNA	1997	Rp450
		DYNA	1998	Rp525
		DYNA	1999	Rp1.450
		DYNA	2000	Rp750
		DYNA	2001	Rp490
		DYNA	2002	Rp850
		DYNA	2003	Rp1.400
		DYNA	2004	Rp1.800
33	PT EKADHARMA TAPE INDUSTRIES	EKAD	1996	Rp850
		EKAD	1997	Rp1.825
		EKAD	1998	Rp1.250
		EKAD	1999	Rp1.125
		EKAD	2000	Rp700
		EKAD	2001	Rp450
		EKAD	2002	Rp500
		EKAD	2003	Rp950
		EKAD	2004	Rp245
34	PT ERATEX DJAJA LTD. TBK	ERTX	1996	Rp700
		ERTX	1997	Rp150
		ERTX	1998	Rp400
		ERTX	1999	Rp850
		ERTX	2000	Rp425
		ERTX	2001	Rp420
		ERTX	2002	Rp200
		ERTX	2003	Rp210
		ERTX	2004	Rp130

35	PT EVER SHINE TEXTILE INDUSTRY TBK	ESTI	1996	Rp700
		ESTI	1997	Rp450
		ESTI	1998	Rp300
		ESTI	1999	Rp1.000
		ESTI	2000	Rp250
		ESTI	2001	Rp320
		ESTI	2002	Rp300
		ESTI	2003	Rp125
		ESTI	2004	Rp80
36	PT ETERINDO WAHANATAMA TBK	ETWA	1996	Rp875
		ETWA	1997	Rp875
		ETWA	1998	Rp425
		ETWA	1999	Rp825
		ETWA	2000	Rp460
		ETWA	2001	Rp80
		ETWA	2002	Rp75
		ETWA	2003	Rp170
		ETWA	2004	Rp170
37	PT FAST FOOD INDONESIA TBK	FAST	1996	Rp4.000
	restaurant	FAST	1997	Rp3.900
		FAST	1998	Rp575
		FAST	1999	Rp9.500
		FAST	2000	Rp950
		FAST	2001	Rp775
		FAST	2002	Rp900
		FAST	2003	Rp925
		FAST	2004	Rp1.050
38	PT FAJAR SURYA WISESA TBK	FASW	1996	Rp1.025
		FASW	1997	Rp400
		FASW	1998	Rp425
		FASW	1999	Rp825
		FASW	2000	Rp360
		FASW	2001	Rp480
		FASW	2002	Rp420
		FASW	2003	Rp650
		FASW	2004	Rp950
39	PT GANDA WANGSA UTAMA TBK	GDWU	1996	Rp850
	(PT Kasogi International Tbk)	GDWU	1997	Rp200
		GDWU	1998	Rp75
		GDWU	1999	Rp275
		GDWU	2000	Rp50
		GDWU	2001	Rp50
		GDWU	2002	Rp35
		GDWU	2003	Rp25
		GDWU	2004	Rp25

40	PT GOOD YEAR INDONESIA TBK	GDYR	1996	Rp2.575
		GDYR	1997	Rp850
		GDYR	1998	Rp2.800
		GDYR	1999	Rp10.000
		GDYR	2000	Rp6.000
		GDYR	2001	Rp4.900
		GDYR	2002	Rp4.350
		GDYR	2003	Rp3.750
		GDYR	2004	Rp8.600
41	PT GUDANG GARAM TBK	GGRM	1996	Rp10.200
		GGRM	1997	Rp8.375
		GGRM	1998	Rp11.650
		GGRM	1999	Rp16.725
		GGRM	2000	Rp13.000
		GGRM	2001	Rp8.650
		GGRM	2002	Rp8.300
		GGRM	2003	Rp13.600
		GGRM	2004	Rp13.550
42	PT GADJAH TUNGGAL TBK	GJTL	1996	Rp1.025
		GJTL	1997	Rp525
		GJTL	1998	Rp225
		GJTL	1999	Rp975
		GJTL	2000	Rp360
		GJTL	2001	Rp135
		GJTL	2002	Rp230
		GJTL	2003	Rp550
		GJTL	2004	Rp650
43	PT GREAT RIVER INTERNATIONAL TBK	GRIV	1996	Rp1.350
	retail trade	GRIV	1997	Rp450
		GRIV	1998	Rp275
		GRIV	1999	Rp825
		GRIV	2000	Rp850
		GRIV	2001	Rp550
		GRIV	2002	Rp550
		GRIV	2003	Rp410
		GRIV	2004	Rp450
44	PT PANASIA INDOSYNTEC TBK	HDTX	1996	Rp350
		HDTX	1997	Rp350
		HDTX	1998	Rp225
		HDTX	1999	Rp675
		HDTX	2000	Rp825
		HDTX	2001	Rp205
		HDTX	2002	Rp200
		HDTX	2003	Rp275

		HDTX	2004	Rp500
45	PT HEXINDO ADIPERKASA TBK	HEXA	1996	Rp3.350
	wholesale	HEXA	1997	Rp4.200
		HEXA	1998	Rp625
		HEXA	1999	Rp2.750
		HEXA	2000	Rp925
		HEXA	2001	Rp700
		HEXA	2002	Rp395
		HEXA	2003	Rp925
		HEXA	2004	Rp3.075
46	PT HANJAYA MANDALA SAMPOERNA TBK	HMSP	1996	Rp26.500
		HMSP	1997	Rp4.150
		HMSP	1998	Rp5.275
		HMSP	1999	Rp17.775
		HMSP	2000	Rp14.900
		HMSP	2001	Rp3.200
		HMSP	2002	Rp3.700
		HMSP	2003	Rp4.475
		HMSP	2004	Rp6.650
47	PT IGAR JAYA TBK	IGAR	1996	Rp775
		IGAR	1997	Rp700
		IGAR	1998	Rp300
		IGAR	1999	Rp300
		IGAR	2000	Rp100
		IGAR	2001	Rp65
		IGAR	2002	Rp85
		IGAR	2003	Rp135
		IGAR	2004	Rp105
48	PT INTIKERAMIK ALAMASRI INDUSTRI TBK	IKAI	1996	Rp725
		IKAI	1997	Rp725
		IKAI	1998	Rp250
		IKAI	1999	Rp425
		IKAI	2000	Rp295
		IKAI	2001	Rp165
		IKAI	2002	Rp100
		IKAI	2003	Rp100
		IKAI	2004	Rp125
49	PT SUMI INDO KABEL TBK	IKBI	1996	Rp850
		IKBI	1997	Rp900
		IKBI	1998	Rp425
		IKBI	1999	Rp875
		IKBI	2000	Rp650
		IKBI	2001	Rp725
		IKBI	2002	Rp335

		IKBI	2003	Rp300
		IKBI	2004	Rp575
50	PT INDOMOBIL SUKSES INTERNATIONAL TBK	IMAS	1996	Rp2.300
		IMAS	1997	Rp3.350
		IMAS	1998	Rp4.050
		IMAS	1999	Rp1.500
		IMAS	2000	Rp1.325
		IMAS	2001	Rp650
		IMAS	2002	Rp650
		IMAS	2003	Rp1.000
		IMAS	2004	Rp900
51	PT INDAL ALUMINIUM INDUSTRY TBK	INAI	1996	Rp1.050
		INAI	1997	Rp375
		INAI	1998	Rp250
		INAI	1999	Rp625
		INAI	2000	Rp300
		INAI	2001	Rp280
		INAI	2002	Rp140
		INAI	2003	Rp145
		INAI	2004	Rp205
52	PT INTAN WIJAYA CHEMICAL IND. TBK	INCI	1996	Rp1.100
		INCI	1997	Rp425
		INCI	1998	Rp500
		INCI	1999	Rp1.100
		INCI	2000	Rp675
		INCI	2001	Rp405
		INCI	2002	Rp275
		INCI	2003	Rp300
		INCI	2004	Rp440
53	PT INDOFOOD SUKSES MAKMUR TBK	INDF	1996	Rp10.500
		INDF	1997	Rp1.800
		INDF	1998	Rp4.050
		INDF	1999	Rp8.750
		INDF	2000	Rp775
		INDF	2001	Rp775
		INDF	2002	Rp900
		INDF	2003	Rp800
		INDF	2004	Rp800
54	PT INDOSPRING	INDS	1996	Rp1.100
		INDS	1997	Rp1.650
		INDS	1998	Rp350
		INDS	1999	Rp1.450
		INDS	2000	Rp650
		INDS	2001	Rp375

		INDS	2002	Rp650
		INDS	2003	Rp700
		INDS	2004	Rp600
55	PT INDAH KIAT PULP & PAPER TBK	INKP	1996	Rp2,275
		INKP	1997	Rp975
		INKP	1998	Rp2,175
		INKP	1999	Rp2,750
		INKP	2000	Rp825
		INKP	2001	Rp315
		INKP	2002	Rp145
		INKP	2003	Rp575
		INKP	2004	Rp1,025
56	PT INTRACO PENTA TBK	INTA	1996	Rp1,250
	wholesale	INTA	1997	Rp225
		INTA	1998	Rp125
		INTA	1999	Rp1,600
		INTA	2000	Rp340
		INTA	2001	Rp250
		INTA	2002	Rp240
		INTA	2003	Rp310
		INTA	2004	Rp525
57	PT INTER DELTA TBK	INTD	1996	Rp2,900
	wholesale	INTD	1997	Rp350
		INTD	1998	Rp325
		INTD	1999	Rp725
		INTD	2000	Rp220
		INTD	2001	Rp260
		INTD	2002	Rp210
		INTD	2003	Rp135
		INTD	2004	Rp130
58	PT INDOCEMENT TUNGGAL PRAKARSA TBK	INTP	1996	Rp8,000
		INTP	1997	Rp1,800
		INTP	1998	Rp3,175
		INTP	1999	Rp3,100
		INTP	2000	Rp1,600
		INTP	2001	Rp700
		INTP	2002	Rp675
		INTP	2003	Rp2,125
		INTP	2004	Rp3,075
59	PT JEMBO CABLE COMPANYTBK	JECC	1996	Rp825
		JECC	1997	Rp250
		JECC	1998	Rp250
		JECC	1999	Rp625
		JECC	2000	Rp500

		JECC	2001	Rp450
		JECC	2002	Rp775
		JECC	2003	Rp350
		JECC	2004	Rp375
60	PT JAKARTA KYOEI STEEL WORKS LIMITED TBK	JKSW	1996	Rp675
		JKSW	1997	Rp675
		JKSW	1998	Rp500
		JKSW	1999	Rp275
		JKSW	2000	Rp70
		JKSW	2001	Rp25
		JKSW	2002	Rp15
		JKSW	2003	Rp725
		JKSW	2004	Rp65
61	PT JAYA PARI STEEL CORP. LTD. TBK	JPRS	1996	Rp1.300
		JPRS	1997	Rp200
		JPRS	1998	Rp175
		JPRS	1999	Rp475
		JPRS	2000	Rp150
		JPRS	2001	Rp60
		JPRS	2002	Rp130
		JPRS	2003	Rp395
		JPRS	2004	Rp900
62	PT KARWELL INDONESIA TBK	KARW	1996	Rp1.250
		KARW	1997	Rp775
		KARW	1998	Rp700
		KARW	1999	Rp800
		KARW	2000	Rp600
		KARW	2001	Rp400
		KARW	2002	Rp350
		KARW	2003	Rp410
		KARW	2004	Rp410
63	PT GT KABEL INDONESIA TBK	KBLI	1996	Rp1.050
		KBLI	1997	Rp425
		KBLI	1998	Rp100
		KBLI	1999	Rp350
		KBLI	2000	Rp105
		KBLI	2001	Rp60
		KBLI	2002	Rp60
		KBLI	2003	Rp80
		KBLI	2004	Rp70
64	PT KABELINDO MURNI TBK	KBLM	1996	Rp800
		KBLM	1997	Rp225
		KBLM	1998	Rp125
		KBLM	1999	Rp650

		KBLM	2000	Rp255
		KBLM	2001	Rp130
		KBLM	2002	Rp60
		KBLM	2003	Rp70
		KBLM	2004	Rp70
65	PT KEDAWUNG SETIA INDUSTRIAL LTD. TBK	KDSI	1996	Rp1.150
		KDSI	1997	Rp200
		KDSI	1998	Rp200
		KDSI	1999	Rp2.250
		KDSI	2000	Rp380
		KDSI	2001	Rp250
		KDSI	2002	Rp155
		KDSI	2003	Rp175
		KDSI	2004	Rp130
66	PT KERAMIKA INDONESIA TBK	KIAS	1996	Rp3.500
		KIAS	1997	Rp400
		KIAS	1998	Rp200
		KIAS	1999	Rp425
		KIAS	2000	Rp175
		KIAS	2001	Rp175
		KIAS	2002	Rp175
		KIAS	2003	Rp175
		KIAS	2004	Rp175
67	PT KEDAUNG INDAH CAN	KICI	1996	Rp550
		KICI	1997	Rp300
		KICI	1998	Rp450
		KICI	1999	Rp1.000
		KICI	2000	Rp420
		KICI	2001	Rp300
		KICI	2002	Rp325
		KICI	2003	Rp200
		KICI	2004	Rp195
68	PT KURNIA KAPUAS UTAMA TBK	KKGI	1996	Rp1.300
		KKGI	1997	Rp500
		KKGI	1998	Rp1.550
		KKGI	1999	Rp825
		KKGI	2000	Rp510
		KKGI	2001	Rp310
		KKGI	2002	Rp100
		KKGI	2003	Rp160
		KKGI	2004	Rp205
69	PT KALBE FARMA TBK	KLBF	1996	Rp2.700
		KLBF	1997	Rp975
		KLBF	1998	Rp400

		KLBF	1999	Rp1.125
		KLBF	2000	Rp310
		KLBF	2001	Rp225
		KLBF	2002	Rp275
		KLBF	2003	Rp1.000
		KLBF	2004	Rp550
70	PT KOMATSU INDONESIA TBK	KOMI	1996	Rp1.575
		KOMI	1997	Rp525
		KOMI	1998	Rp450
		KOMI	1999	Rp1.975
		KOMI	2000	Rp1.025
		KOMI	2001	Rp825
		KOMI	2002	Rp800
		KOMI	2003	Rp1.375
		KOMI	2004	Rp3.125
71	PT PERDANA BANGUN PUSAKA TBK	KONI	1996	Rp675
	wholesale	KONI	1997	Rp175
		KONI	1998	Rp275
		KONI	1999	Rp2.400
		KONI	2000	Rp500
		KONI	2001	Rp200
		KONI	2002	Rp265
		KONI	2003	Rp265
		KONI	2004	Rp275
72	PT LION METAL WORKS TBK	LION	1996	Rp1.275
		LION	1997	Rp700
		LION	1998	Rp425
		LION	1999	Rp900
		LION	2000	Rp575
		LION	2001	Rp600
		LION	2002	Rp750
		LION	2003	Rp850
		LION	2004	Rp1.700
73	PT LANGGENG MAKMUR PLASTIC INDUSTRY LTD	LMPI	1996	Rp2.725
		LMPI	1997	Rp225
		LMPI	1998	Rp175
		LMPI	1999	Rp475
		LMPI	2000	Rp210
		LMPI	2001	Rp100
		LMPI	2002	Rp45
		LMPI	2003	Rp50
		LMPI	2004	Rp85
74	PT LIONMESH PRIMA TBK	LMSH	1996	Rp1.025
		LMSH	1997	Rp1.675

		LMSH	1998	Rp900
		LMSH	1999	Rp1.100
		LMSH	2000	Rp575
		LMSH	2001	Rp85
		LMSH	2002	Rp350
		LMSH	2003	Rp550
		LMSH	2004	Rp1.525
75	PT LIPPO ENTERPRISES TBK	LPIN	1996	Rp5.850
		LPIN	1997	Rp4.050
		LPIN	1998	Rp2.300
		LPIN	1999	Rp1.750
		LPIN	2000	Rp1.400
		LPIN	2001	Rp750
		LPIN	2002	Rp600
		LPIN	2003	Rp650
		LPIN	2004	Rp850
76	PT LAUTAN LUAS TBK	LTLS	1996	Rp900
	wholesale	LTLS	1997	Rp900
		LTLS	1998	Rp2.000
		LTLS	1999	Rp825
		LTLS	2000	Rp405
		LTLS	2001	Rp240
		LTLS	2002	Rp80
		LTLS	2003	Rp285
		LTLS	2004	Rp370
77	PT MODERN PHOTO FILM COMPANY TBK	MDRN	1996	Rp7.500
		MDRN	1997	Rp1.600
		MDRN	1998	Rp500
		MDRN	1999	Rp2.400
		MDRN	2000	Rp975
		MDRN	2001	Rp475
		MDRN	2002	Rp405
		MDRN	2003	Rp625
		MDRN	2004	Rp600
78	PT MERCK INDONESIA TBK	MERK	1996	Rp13.500
		MERK	1997	Rp9.000
		MERK	1998	Rp19.000
		MERK	1999	Rp7.725
		MERK	2000	Rp7.450
		MERK	2001	Rp10.500
		MERK	2002	Rp10.000
		MERK	2003	Rp16.000
		MERK	2004	Rp22.800
79	PT MULTI BINTANG INDONESIA	MLBI	1996	Rp22.000

		MLBI	1997	Rp34.500
		MLBI	1998	Rp40.000
		MLBI	1999	Rp40.000
		MLBI	2000	Rp34.000
		MLBI	2001	Rp21.000
		MLBI	2002	Rp27.500
		MLBI	2003	Rp32.000
		MLBI	2004	Rp42.500
80	PT MULTIPOLAR CORPORATION	MLPL	1996	Rp1.600
		MLPL	1997	Rp150
		MLPL	1998	Rp100
		MLPL	1999	Rp1.225
		MLPL	2000	Rp355
		MLPL	2001	Rp245
		MLPL	2002	Rp170
		MLPL	2003	Rp210
		MLPL	2004	Rp315
81	PT MUSTIKA RATU TBK	MRAT	1996	Rp4.400
		MRAT	1997	Rp975
		MRAT	1998	Rp950
		MRAT	1999	Rp2.300
		MRAT	2000	Rp1.350
		MRAT	2001	Rp1.250
		MRAT	2002	Rp360
		MRAT	2003	Rp435
		MRAT	2004	Rp410
82	PT METRODATA ELECTRONICS TBK	MTDL	1996	Rp3.400
	comp n service	MTDL	1997	Rp2.000
		MTDL	1998	Rp800
		MTDL	1999	Rp1.775
		MTDL	2000	Rp465
		MTDL	2001	Rp120
		MTDL	2002	Rp115
		MTDL	2003	Rp90
		MTDL	2004	Rp85
83	PT MIWON INDONESIA	MWON	1996	Rp3.350
		MWON	1997	Rp1.750
		MWON	1998	Rp1.100
		MWON	1999	Rp1.200
		MWON	2000	Rp1.175
		MWON	2001	Rp925
		MWON	2002	Rp1.400
		MWON	2003	Rp1.400
		MWON	2004	Rp1.400

84	PT MAYORA INDAH	MYOR	1996	Rp1,100
		MYOR	1997	Rp475
		MYOR	1998	Rp425
		MYOR	1999	Rp950
		MYOR	2000	Rp550
		MYOR	2001	Rp320
		MYOR	2002	Rp380
		MYOR	2003	Rp875
		MYOR	2004	Rp1,200
85	PT HANSON INDUSTRI UTAMA TBK	MYRX	1996	Rp2,300
		MYRX	1997	Rp4,350
		MYRX	1998	Rp50
		MYRX	1999	Rp275
		MYRX	2000	Rp90
		MYRX	2001	Rp30
		MYRX	2002	Rp50
		MYRX	2003	Rp15
		MYRX	2004	Rp15
86	PT APAC CENTERTEX CORPORATION TBK	MYTX	1996	Rp800
		MYTX	1997	Rp200
		MYTX	1998	Rp200
		MYTX	1999	Rp650
		MYTX	2000	Rp500
		MYTX	2001	Rp200
		MYTX	2002	Rp110
		MYTX	2003	Rp175
		MYTX	2004	Rp130
87	PT NIPRESS	NIPS	1996	Rp1,000
		NIPS	1997	Rp400
		NIPS	1998	Rp550
		NIPS	1999	Rp1,850
		NIPS	2000	Rp1,400
		NIPS	2001	Rp525
		NIPS	2002	Rp800
		NIPS	2003	Rp975
		NIPS	2004	Rp1,200
88	PT PANASIA FILAMENT INTI TBK	PAFI	1996	Rp350
		PAFI	1997	Rp350
		PAFI	1998	Rp225
		PAFI	1999	Rp400
		PAFI	2000	Rp400
		PAFI	2001	Rp175
		PAFI	2002	Rp100
		PAFI	2003	Rp80
		PAFI	2004	Rp100

89	PT PAN BROTHER TEX TBK	PBRX	1996	Rp1.400
		PBRX	1997	Rp175
		PBRX	1998	Rp375
		PBRX	1999	Rp975
		PBRX	2000	Rp1.300
		PBRX	2001	Rp950
		PBRX	2002	Rp2.000
		PBRX	2003	Rp385
		PBRX	2004	Rp405
90	PT PROCTER & GAMBLE INDONESIA TBK	PGIN	1996	Rp8.850
		PGIN	1997	Rp11.500
		PGIN	1998	Rp30.000
		PGIN	1999	Rp34.900
		PGIN	2000	Rp45.500
		PGIN	2001	Rp46.000
		PGIN	2002	Rp75.000
		PGIN	2003	Rp73.000
		PGIN	2004	Rp73.000
91	PT PELANGI INDAH CANINDO TBK	PICO	1996	Rp675
		PICO	1997	Rp675
		PICO	1998	Rp100
		PICO	1999	Rp325
		PICO	2000	Rp300
		PICO	2001	Rp105
		PICO	2002	Rp60
		PICO	2003	Rp150
		PICO	2004	Rp130
92	PT POLYSINDO EKA PERKASA TBK	POLY	1996	Rp1.350
		POLY	1997	Rp975
		POLY	1998	Rp750
		POLY	1999	Rp425
		POLY	2000	Rp225
		POLY	2001	Rp25
		POLY	2002	Rp20
		POLY	2003	Rp30
		POLY	2004	Rp45
93	PT PRIMA ALLOY STEEL UNIVERSAL	PRAS	1996	Rp1.100
		PRAS	1997	Rp550
		PRAS	1998	Rp200
		PRAS	1999	Rp400
		PRAS	2000	Rp325
		PRAS	2001	Rp270
		PRAS	2002	Rp235
		PRAS	2003	Rp300

		PRAS	2004	Rp800
94	PT PRASHIDA ANEKA NIAGA TBK	PSDN	1996	Rp3.300
		PSDN	1997	Rp500
		PSDN	1998	Rp175
		PSDN	1999	Rp475
		PSDN	2000	Rp160
		PSDN	2001	Rp95
		PSDN	2002	Rp125
		PSDN	2003	Rp110
		PSDN	2004	Rp105
95	PT PUTRA SEJAHTERA PIONEERINDO TBK	PTSP	1996	Rp2.475
		PTSP	1997	Rp2.300
		PTSP	1998	Rp200
		PTSP	1999	Rp275
		PTSP	2000	Rp105
		PTSP	2001	Rp180
		PTSP	2002	Rp500
		PTSP	2003	Rp400
		PTSP	2004	Rp400
96	PT RODA VIVATEX TBK	RDTX	1996	Rp1.525
		RDTX	1997	Rp550
		RDTX	1998	Rp950
		RDTX	1999	Rp1.425
		RDTX	2000	Rp1.050
		RDTX	2001	Rp1.175
		RDTX	2002	Rp1.000
		RDTX	2003	Rp900
		RDTX	2004	Rp825
97	PT RICKY PUTRA GLOBALINDO TBK	RICY	1996	Rp500
		RICY	1997	Rp500
		RICY	1998	Rp225
		RICY	1999	Rp500
		RICY	2000	Rp340
		RICY	2001	Rp170
		RICY	2002	Rp40
		RICY	2003	Rp110
		RICY	2004	Rp355
98	PT SURABAYA AGUNG INDUSTRI PULP	SAIP	1996	Rp775
		SAIP	1997	Rp300
		SAIP	1998	Rp325
		SAIP	1999	Rp625
		SAIP	2000	Rp135
		SAIP	2001	Rp75
		SAIP	2002	Rp80

		SAIP	2003	Rp65
		SAIP	2004	Rp65
99	PT SUPREME CABLE MANUFACTURING CORP.	SCCO	1996	Rp2.425
		SCCO	1997	Rp275
		SCCO	1998	Rp225
		SCCO	1999	Rp700
		SCCO	2000	Rp1.000
		SCCO	2001	Rp1.000
		SCCO	2002	Rp1.025
		SCCO	2003	Rp1.025
		SCCO	2004	Rp1.000
100	PT SCHERING-PLOUGH INDONESIA	SCPI	1996	Rp9.000
		SCPI	1997	Rp5.250
		SCPI	1998	Rp10.500
		SCPI	1999	Rp9.000
		SCPI	2000	Rp12.000
		SCPI	2001	Rp25.000
		SCPI	2002	Rp6.000
		SCPI	2003	Rp8.500
		SCPI	2004	Rp11.500
101	PT SARI HUSADA TBK	SHDA	1996	Rp14.400
		SHDA	1997	Rp5.000
		SHDA	1998	Rp1.975
		SHDA	1999	Rp3.500
		SHDA	2000	Rp4.500
		SHDA	2001	Rp9.250
		SHDA	2002	Rp10.000
		SHDA	2003	Rp14.500
		SHDA	2004	Rp1.900
102	PT VAN DER HORST INDONESIA TBK	SIMA	1996	Rp2.400
	(PT SIWANI MAKMUR TBK)	SIMA	1997	Rp225
		SIMA	1998	Rp325
		SIMA	1999	Rp800
		SIMA	2000	Rp140
		SIMA	2001	Rp245
		SIMA	2002	Rp195
		SIMA	2003	Rp210
		SIMA	2004	Rp265
103	PT SIERAD PRODUCE TBK	SIPD	1996	Rp150
		SIPD	1997	Rp150
		SIPD	1998	Rp50
		SIPD	1999	Rp225
		SIPD	2000	Rp95
		SIPD	2001	Rp55

		SIPD	2002	Rp20
		SIPD	2003	Rp40
		SIPD	2004	Rp105
104	PT SEKAR LAUT			
		SKLT	1996	Rp650
		SKLT	1997	Rp200
		SKLT	1998	Rp125
		SKLT	1999	Rp550
		SKLT	2000	Rp550
		SKLT	2001	Rp400
		SKLT	2002	Rp400
		SKLT	2003	Rp350
		SKLT	2004	Rp450
105	PT SMART CORPORATION TBK			
	(PT SINAR MAS AGRO RESOURCES AND	SMAR	1996	Rp1.650
	TECHNOLOGY CORPORATION)	SMAR	1997	Rp475
		SMAR	1998	Rp1.825
		SMAR	1999	Rp3.950
		SMAR	2000	Rp2.800
		SMAR	2001	Rp800
		SMAR	2002	Rp700
		SMAR	2003	Rp3.075
		SMAR	2004	Rp3.100
106	PT SEMEN CIBINONG			
		SMCB	1996	Rp6.175
		SMCB	1997	Rp250
		SMCB	1998	Rp300
		SMCB	1999	Rp500
		SMCB	2000	Rp435
		SMCB	2001	Rp385
		SMCB	2002	Rp145
		SMCB	2003	Rp405
		SMCB	2004	Rp575
107	PT SEMEN GRESIK (PERSERO) TBK			
		SMGR	1996	Rp7.600
		SMGR	1997	Rp3.225
		SMGR	1998	Rp8.300
		SMGR	1999	Rp11.075
		SMGR	2000	Rp5.800
		SMGR	2001	Rp5.500
		SMGR	2002	Rp8.150
		SMGR	2003	Rp7.850
		SMGR	2004	Rp18.500
108	PT SELAMAT SEMPURNA TBK			
		SMSM	1996	Rp1.850
		SMSM	1997	Rp700
		SMSM	1998	Rp800
		SMSM	1999	Rp1.125
		SMSM	2000	Rp2.000

		SMSM	2001	Rp1,800
		SMSM	2002	Rp1,425
		SMSM	2003	Rp265
		SMSM	2004	Rp290
109	PT SORINI CORPORATION TBK	SOBI	1996	Rp1,100
		SOBI	1997	Rp500
		SOBI	1998	Rp125
		SOBI	1999	Rp500
		SOBI	2000	Rp270
		SOBI	2001	Rp385
		SOBI	2002	Rp500
		SOBI	2003	Rp750
		SOBI	2004	Rp1,075
110	PT SUPARMA TBK	SPMA	1996	Rp1,100
		SPMA	1997	Rp250
		SPMA	1998	Rp150
		SPMA	1999	Rp300
		SPMA	2000	Rp105
		SPMA	2001	Rp75
		SPMA	2002	Rp80
		SPMA	2003	Rp200
		SPMA	2004	Rp180
111	PT SQUIBB INDONESIA TBK	SQBI	1996	Rp5,075
		SQBI	1997	Rp7,200
		SQBI	1998	Rp7,300
		SQBI	1999	Rp7,500
		SQBI	2000	Rp10,500
		SQBI	2001	Rp10,500
		SQBI	2002	Rp10,500
		SQBI	2003	Rp10,500
		SQBI	2004	Rp10,500
112	PT SARASA NUGRAHA TBK	SRSN	1996	Rp900
		SRSN	1997	Rp150
		SRSN	1998	Rp250
		SRSN	1999	Rp600
		SRSN	2000	Rp925
		SRSN	2001	Rp60
		SRSN	2002	Rp45
		SRSN	2003	Rp90
		SRSN	2004	Rp30
113	PT SUNSON TEXTILE MANUFACTURER TBK	SSTM	1996	Rp300
		SSTM	1997	Rp300
		SSTM	1998	Rp350
		SSTM	1999	Rp600

		SSTM	2000	Rp465
		SSTM	2001	Rp340
		SSTM	2002	Rp90
		SSTM	2003	Rp140
		SSTM	2004	Rp150
114	PT SIANTAR TOP TBK	STTP	1996	Rp2.150
		STTP	1997	Rp975
		STTP	1998	Rp2.025
		STTP	1999	Rp3.950
		STTP	2000	Rp1.450
		STTP	2001	Rp270
		STTP	2002	Rp260
		STTP	2003	Rp180
		STTP	2004	Rp180
115	PT SUBA INDAH TBK	SUBA	1996	Rp1.450
		SUBA	1997	Rp425
		SUBA	1998	Rp375
		SUBA	1999	Rp875
		SUBA	2000	Rp180
		SUBA	2001	Rp30
		SUBA	2002	Rp20
		SUBA	2003	Rp125
		SUBA	2004	Rp100
116	PT SURYA DUMAI INDUSTRI TBK	SUDI	1996	Rp2.800
		SUDI	1997	Rp2.050
		SUDI	1998	Rp2.000
		SUDI	1999	Rp650
		SUDI	2000	Rp290
		SUDI	2001	Rp525
		SUDI	2002	Rp450
		SUDI	2003	Rp385
		SUDI	2004	Rp375
117	PT SUMALINDO LESTARI JAYA TBK	SULI	1996	Rp2.800
		SULI	1997	Rp775
		SULI	1998	Rp400
		SULI	1999	Rp850
		SULI	2000	Rp250
		SULI	2001	Rp125
		SULI	2002	Rp60
		SULI	2003	Rp110
		SULI	2004	Rp415
118	PT TEMBAGA MULIA SEMANAN TBK	TBMS	1996	Rp1.300
		TBMS	1997	Rp800
		TBMS	1998	Rp700

		TBMS	1999	Rp3.250
		TBMS	2000	Rp2.700
		TBMS	2001	Rp4.000
		TBMS	2002	Rp1.800
		TBMS	2003	Rp2.200
		TBMS	2004	Rp3.000
119	PT TANCHO INDONESIA TBK	TCID	1996	Rp2.350
		TCID	1997	Rp1.475
		TCID	1998	Rp1.500
		TCID	1999	Rp5.000
		TCID	2000	Rp2.900
		TCID	2001	Rp2.100
		TCID	2002	Rp1.500
		TCID	2003	Rp2.350
		TCID	2004	Rp4.000
120	PT TEXMACO JAYA TBK	TEJA	1996	Rp1.200
		TEJA	1997	Rp3.200
		TEJA	1998	Rp3.350
		TEJA	1999	Rp3.125
		TEJA	2000	Rp3.000
		TEJA	2001	Rp2.950
		TEJA	2002	Rp2.950
		TEJA	2003	Rp2.950
		TEJA	2004	Rp2.950
121	PT TIFICO TBK (TEIJIN INDONESIA FIBER CORP.)	TFCO	1996	Rp1.800
		TFCO	1997	Rp1.500
		TFCO	1998	Rp875
		TFCO	1999	Rp925
		TFCO	2000	Rp525
		TFCO	2001	Rp250
		TFCO	2002	Rp240
		TFCO	2003	Rp230
		TFCO	2004	Rp255
122	PT TIRA AUSTENITE TBK	TIRA	1996	Rp1.350
		TIRA	1997	Rp2.150
		TIRA	1998	Rp2.250
		TIRA	1999	Rp1.800
		TIRA	2000	Rp1.700
		TIRA	2001	Rp1.800
		TIRA	2002	Rp2.000
		TIRA	2003	Rp1.175
		TIRA	2004	Rp1.700
123	PT SURYA TOTO INDONESIA TBK	TOTO	1996	Rp4.700
		TOTO	1997	Rp2.900

		TOTO	1998	Rp2.000
		TOTO	1999	Rp5.400
		TOTO	2000	Rp6.150
		TOTO	2001	Rp5.500
		TOTO	2002	Rp5.500
		TOTO	2003	Rp4.650
		TOTO	2004	Rp6.000
124	PT TEXMACO PERKASA ENGINEERING TBK			
		TPEN	1996	Rp1.500
		TPEN	1997	Rp1.325
		TPEN	1998	Rp2.925
		TPEN	1999	Rp2.975
		TPEN	2000	Rp2.975
		TPEN	2001	Rp2.400
		TPEN	2002	Rp3.000
		TPEN	2003	Rp2.200
		TPEN	2004	Rp2.200
125	PT TRI POLYTA INDONESIA TBK			
		TPIA	1996	Rp1.650
		TPIA	1997	Rp575
		TPIA	1998	Rp1.700
		TPIA	1999	Rp1.675
		TPIA	2000	Rp1.100
		TPIA	2001	Rp1.100
		TPIA	2002	Rp1.100
		TPIA	2003	Rp1.100
		TPIA	2004	Rp1.100
126	PT TRAFINDO PERKASA TBK			
		TRPK	1996	Rp1.100
		TRPK	1997	Rp1.225
		TRPK	1998	Rp400
		TRPK	1999	Rp800
		TRPK	2000	Rp675
		TRPK	2001	Rp445
		TRPK	2002	Rp350
		TRPK	2003	Rp575
		TRPK	2004	Rp1.100
127	PT TRIAS SENTOSA TBK			
		TRST	1996	Rp1.200
		TRST	1997	Rp250
		TRST	1998	Rp150
		TRST	1999	Rp850
		TRST	2000	Rp85
		TRST	2001	Rp75
		TRST	2002	Rp170
		TRST	2003	Rp280
		TRST	2004	Rp205
128	PT TEMPO SCAN PACIFIC TBK			
		TSPC	1996	Rp4.350

		TSPC	1997	Rp425
		TSPC	1998	Rp425
		TSPC	1999	Rp5.900
		TSPC	2000	Rp3.075
		TSPC	2001	Rp3.250
		TSPC	2002	Rp4.125
		TSPC	2003	Rp5.900
		TSPC	2004	Rp7.600
129	PT TUNAS RIDEAN TBK	TURI	1996	Rp4.550
		TURI	1997	Rp500
		TURI	1998	Rp375
		TURI	1999	Rp1.250
		TURI	2000	Rp1.125
		TURI	2001	Rp225
		TURI	2002	Rp285
		TURI	2003	Rp300
		TURI	2004	Rp675
130	PT WAHANA JAYA PERKASA TBK	UGAR	1996	Rp775
	(PY Ugahari Tbk)	UGAR	1997	Rp1.500
		UGAR	1998	Rp400
		UGAR	1999	Rp450
		UGAR	2000	Rp190
		UGAR	2001	Rp155
		UGAR	2002	Rp80
		UGAR	2003	Rp230
		UGAR	2004	Rp230
131	PT ULTRA JAYA MILK TBK	ULTJ	1996	Rp1.100
		ULTJ	1997	Rp1,000
		ULTJ	1998	Rp625
		ULTJ	1999	Rp1.000
		ULTJ	2000	Rp1.175
		ULTJ	2001	Rp700
		ULTJ	2002	Rp600
		ULTJ	2003	Rp450
		ULTJ	2004	Rp425
132	PT UNGGUL INDAH CAHAYA TBK	UNIC	1996	Rp2.400
		UNIC	1997	Rp1.325
		UNIC	1998	Rp950
		UNIC	1999	Rp270
		UNIC	2000	Rp1.200
		UNIC	2001	Rp1.400
		UNIC	2002	Rp1.350
		UNIC	2003	Rp3.000
		UNIC	2004	Rp2.525

133	PT UNITED TRACTORS TBK	UNTR	1996	Rp3,675
	wholesale	UNTR	1997	Rp650
		UNTR	1998	Rp500
		UNTR	1999	Rp6,900
		UNTR	2000	Rp425
		UNTR	2001	Rp360
		UNTR	2002	Rp305
		UNTR	2003	Rp1,250
		UNTR	2004	Rp2,275
134	PT UNILEVER INDONESIA TBK	UNVR	1996	Rp35,200
		UNVR	1997	Rp30,000
		UNVR	1998	Rp30,000
		UNVR	1999	Rp115,000
		UNVR	2000	Rp12,500
		UNVR	2001	Rp16,350
		UNVR	2002	Rp18,200
		UNVR	2003	Rp3,625
		UNVR	2004	Rp3,300
135	PT VOKSEL ELEKTRIC TBK	VOKS	1996	Rp1,050
		VOKS	1997	Rp275
		VOKS	1998	Rp200
		VOKS	1999	Rp550
		VOKS	2000	Rp290
		VOKS	2001	Rp200
		VOKS	2002	Rp130
		VOKS	2003	Rp90
		VOKS	2004	Rp165

Appendix 3: Interest Rates on Guarantee in Rupiah - Average over Month

Year	Month	Rate
1997	January	12.16%
	February	11.75%
	March	11.07%
	April	10.72%
	May	10.63%
	June	10.50%
	July	10.87%
	August	13.67%
	September	22.00%
	October	20.70%
	November	20.00%
	December	20.00%
	Average	**14.51%**

1998	January	20.00%
	February	22.00%
	March	27.75%
	April	46.43%
	May	58.00%
	June	58.00%
	July	70.81%
	August	70.73%
	September	68.76%
	October	59.72%
	November	51.25%
	December	38.44%
	Average	**49.32%**

1999	January	36.43%
	February	37.50%
	March	37.84%
	April	35.19%
	May	28.73%
	June	22.05%
	July	10.10%
	August	13.20%
	September	13.02%
	October	13.13%
	November	13.10%
	December	12.51%
	Average	**22.73%**

Year	Month	Rate
2000	January	11.48%
	February	11.13%
	March	11.03%
	April	11.00%
	May	11.08%
	June	11.74%
	July	13.53%
	August	13.53%
	September	13.62%
	October	13.74%
	November	14.15%
	December	14.53%
	Average	**12.55%**

2001	January	14.74%
	February	14.79%
	March	15.58%
	April	16.09%
	May	16.33%
	June	16.65%
	July	17.17%
	August	17.67%
	September	17.57%
	October	17.58%
	November	17.60%
	December	17.62%
	Average	**16.62%**

2002	January	17.22%
	February	16.90%
	March	16.82%
	April	16.67%
	May	16.03%
	June	15.15%
	July	14.99%
	August	14.64%
	September	13.64%
	October	13.07%
	November	13.08%
	December	13.01%
	Average	**15.10%**

Year	Month	Rate
2003	January	12.80%
	February	12.50%
	March	11.58%
	April	11.24%
	May	10.80%
	June	9.90%
	July	9.20%
	August	9.00%
	September	8.74%
	October	8.53%
	November	8.47%
	December	8.39%
	Average	**10.09%**

2004	January	8.05%
	February	7.64%
	March	7.42%
	April	7.34%
	May	7.32%
	June	7.34%
	July	7.37%
	August	7.37%
	September	7.39%
	October	7.41%
	November	7.42%
	December	3.75%
	Average	**7.15%**

Appendix 4: List of Independent Variables

YEAR	INFLATION	REAL GDP	FINANCIAL DEFICIT	MONEY SUPPLY	OIL PRICE	CURRENCY RATE
1997	11.05%	Rp627.695.400.000.000	Rp7.532.800.000.000	Rp67.542.470.833.333	$18.68	Rp2.903.54
1998	77.63%	Rp989.573.100.000.000	Rp16.260.700.000.000	Rp100.592.253.333.333	$12.28	Rp10.285.38
1999	2.01%	Rp1.099.731.600.000.000	Rp31.235.300.000.000	Rp109.424.305.000.000	$17.47	Rp7.876.89
2000	9.35%	Rp1.389.770.300.000.000	Rp16.132.200.000.000	Rp134.219.895.833.333	$27.60	Rp8.415.79
2001	12.55%	Rp1.684.280.500.000.000	Rp40.485.000.000.000	Rp160.512.333.333.333	$23.12	Rp10.293.78
2002	10.03%	Rp1.863.274.700.000.000	Rp40.453.700.000.000	Rp134.391.666.666.667	$24.36	Rp9.350.14
2003	5.06%	Rp2.045.853.500.000.000	Rp34.436.300.000.000	Rp198.410.750.000.000	$28.10	Rp8.592.80
2004	6.40%	Rp2.303.031.700.000.000	Rp24.417.500.000.000	Rp233.074.666.666.667	$36.05	Rp8.945.82

Appendix 5: List of all variables

SR	INF	LNGDP	IR	LDFD	LNMS	LNOP	FR
-0.9885	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.9595	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.9384	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.9351	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.9174	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.9130	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.9114	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.9103	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.9063	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.9063	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.9023	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.9000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.9000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.8933	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8913	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.8901	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8889	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.8866	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8857	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8816	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8793	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8750	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8690	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.8526	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.8522	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.8519	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.8512	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.8485	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8462	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8434	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8333	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.8333	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8333	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.8311	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.8286	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.8286	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8261	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.8261	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8250	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.8250	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.8231	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8200	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.8182	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.8182	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.8140	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.8138	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.8075	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.8008	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0

-0.8000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.7955	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7943	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7920	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7917	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7917	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7879	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7877	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7875	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7867	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7857	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7852	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.7840	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7784	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7778	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7759	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7750	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7750	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7727	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7647	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7647	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7647	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.7636	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7600	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.7515	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.7500	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7500	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7500	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7488	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7455	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7421	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.7419	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.7407	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7381	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7380	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7353	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.7333	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7333	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7308	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7299	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7286	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7250	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.7244	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7232	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7188	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7158	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.7143	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.7143	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.7123	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7121	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7120	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1

-0.7102	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7069	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7059	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.7059	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.7000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.6970	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6970	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6966	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6923	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6875	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6875	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6842	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6774	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.6750	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.6744	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6735	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6727	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6699	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6667	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6667	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6667	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.6667	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6667	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.6636	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6632	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6571	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6552	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6528	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6515	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6512	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6500	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6500	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6500	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6429	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6429	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6393	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6389	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6364	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6364	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.6329	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6308	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6296	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.6250	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6250	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6250	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6234	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.6216	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1

-0.6182	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6182	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6154	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6154	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6136	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6129	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6098	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.6077	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6071	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6061	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.6050	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.6000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.6000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.6000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5952	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5938	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5934	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.5897	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5893	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5882	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5875	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.5849	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5833	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.5800	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5778	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5778	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5778	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5769	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5757	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5714	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5714	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5714	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5682	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5667	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5636	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5625	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5625	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5579	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5565	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5538	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5517	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5500	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5484	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.5465	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1

-0.5455	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5397	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5385	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5379	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5364	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5294	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5278	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5273	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5238	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5238	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5238	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5200	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5200	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5143	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5128	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5122	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.5109	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5094	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5091	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.5000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.5000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.5000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.5000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.5000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4902	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4878	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4839	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4839	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4839	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.4828	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4810	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4793	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4788	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4776	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4773	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4763	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4727	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4706	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4677	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.4667	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4667	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4643	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4627	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4600	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4565	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4545	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4510	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1

-0.4500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.4500	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.4500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.4487	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.4479	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4444	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4444	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4444	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4424	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4407	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4357	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.4343	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.4324	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4321	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4286	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4286	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.4286	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.4231	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4231	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4231	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4211	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4211	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4207	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4200	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4182	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4167	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4167	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4130	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4125	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.4118	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.4074	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4074	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4074	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4063	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4043	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.4000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.4000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.4000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.4000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3939	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.3929	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3922	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3913	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3889	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3889	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3864	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3857	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3846	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3846	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0

-0.3846	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3830	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3824	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3818	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3810	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.3800	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3800	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.3778	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3750	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.3750	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3750	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3723	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3714	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3684	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3673	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.3617	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3611	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3600	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.3571	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.3571	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3571	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3571	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3571	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3571	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.3571	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3529	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3500	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3500	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.3467	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3433	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3421	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3407	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3395	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.3346	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3333	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3333	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3333	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3333	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3333	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3333	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.3288	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3269	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3269	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3243	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3239	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3210	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.3200	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3182	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.3151	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.3103	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1

-0.3103	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3099	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.3077	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.3077	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.3077	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.3061	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.3059	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.3000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2982	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2923	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.2917	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2911	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2889	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2857	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2857	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2857	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2857	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2830	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2778	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.2769	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2759	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2742	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2727	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2727	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2692	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2688	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2679	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.2679	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.2667	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2647	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2632	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2593	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2571	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2571	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.2571	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.2545	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2525	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2500	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2500	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2500	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2500	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2432	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2432	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2407	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2400	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2391	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.2361	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2308	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2308	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2308	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1

-0.2308	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2250	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2227	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2222	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2222	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.2222	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.2174	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2167	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2135	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2128	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2093	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.2083	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2041	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.2000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.2000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.2000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.2000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.1951	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1933	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1923	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1923	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1875	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1875	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1842	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1842	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1833	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1818	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1789	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.1771	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1714	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1692	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1692	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1667	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.1636	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1628	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1617	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1583	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1579	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1579	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1563	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1545	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1529	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1528	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1512	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1500	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1500	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1489	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1

-0.1477	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.1474	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1444	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1429	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.1429	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1429	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1429	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1429	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1429	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.1429	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1429	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1379	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1333	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1321	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.1304	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1300	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1296	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1250	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1250	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1250	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1250	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1250	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1250	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1250	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1250	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1250	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1200	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1176	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1176	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1167	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1167	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.1167	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.1149	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1122	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.1111	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1057	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1053	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.1045	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.1000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.1000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.1000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.1000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0996	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0968	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0968	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.0968	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.0909	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.0909	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1

-0.0897	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0833	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0833	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0816	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.0800	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0781	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0769	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0741	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.0741	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.0714	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.0714	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.0707	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.0672	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.0667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0667	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.0625	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0625	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0600	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.0575	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0556	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0556	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0556	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0526	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.0517	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.0488	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.0476	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.0476	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0455	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0455	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0426	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.0417	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
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-0.0405	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
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-0.0400	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0400	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0400	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
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-0.0368	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.0357	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
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-0.0356	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0323	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0303	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0303	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0303	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0294	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0267	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0

-0.0260	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0256	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
-0.0250	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.0250	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
-0.0250	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
-0.0244	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0244	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
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-0.0236	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
-0.0208	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
-0.0200	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
-0.0182	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
-0.0167	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
-0.0147	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
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0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
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0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
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0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1

0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
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0.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
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0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0042	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
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0.0110	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0127	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0139	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0169	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0171	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0192	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0250	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0270	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0274	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0278	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0278	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0

0.0303	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.0357	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0377	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0435	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0444	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0465	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0469	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0500	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0519	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0526	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0569	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0571	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0575	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0588	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0588	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.0600	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0610	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0625	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0714	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0714	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0714	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0714	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0769	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0769	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0789	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0811	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0833	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.0833	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0833	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.0862	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.0886	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0909	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.0909	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.0943	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.0976	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.1000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.1026	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1071	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1087	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.1111	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.1111	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1111	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1111	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1131	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1136	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.1154	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1154	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.1190	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.1250	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1

0.1290	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1333	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1351	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.1389	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.1429	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.1429	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1429	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.1429	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1475	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.1563	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1594	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1613	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1613	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.1633	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.1636	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1636	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1667	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1667	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1667	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1667	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.1698	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.1714	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.1750	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.1765	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1818	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.1818	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.1818	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.1875	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.2059	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2083	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2090	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.2095	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2188	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2222	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.2222	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2222	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.2222	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2308	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2353	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2419	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2500	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2500	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2500	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2537	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.2619	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2644	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.2667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2692	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1

0.2711	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.2745	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2745	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2747	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2766	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2778	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2800	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.2813	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2813	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2857	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2857	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.2857	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2881	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2903	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2917	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.2941	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.2982	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.2987	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.2994	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.3000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.3037	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.3077	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.3077	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.3080	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.3095	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.3095	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.3158	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.3250	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.3281	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.3333	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.3333	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.3333	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.3333	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.3333	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.3343	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.3529	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.3636	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.3714	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.3750	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.3750	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.3750	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.3910	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.4000	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.4022	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.4063	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.4094	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.4103	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.4138	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4167	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.4187	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.4198	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1

0.4211	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.4250	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4259	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.4286	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.4286	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.4303	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.4333	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4356	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.4444	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.4468	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4471	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4500	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.4565	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.4615	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4688	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.4815	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.4818	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.4860	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.4906	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5000	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.5000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.5000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.5000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.5000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5135	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.5238	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.5385	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5417	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.5432	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5476	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5556	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5667	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5682	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.5714	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.5714	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5873	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5882	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5909	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.5926	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.6000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.6000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.6000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.6154	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.6154	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.6304	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.6341	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.6386	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0

0.6429	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.6471	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.6471	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.6667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.6667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.6667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.6667	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.6667	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.6848	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.6875	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.6935	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.7000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.7000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.7000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.7021	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.7037	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.7049	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.7143	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.7143	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.7188	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.7222	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.7273	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.7333	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.7347	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.7500	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.7500	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.7639	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
0.7722	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.7778	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.7778	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
0.7826	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.7857	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.7857	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.8000	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
0.8103	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.8182	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.8200	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.8333	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.8333	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.8421	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
0.8571	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.8571	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.8913	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.9000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.9130	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.9167	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.9200	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
0.9231	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.9355	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
0.9412	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.9412	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1

0.9506	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
0.9512	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
0.9600	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.0000	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.0000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.0556	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
1.0588	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.0625	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
1.0698	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.0769	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.0833	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
1.1053	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
1.1111	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.1111	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.1176	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.1250	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.1250	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.1250	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.1429	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.1471	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
1.1605	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.1644	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.1667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
1.1905	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2075	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.2188	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2195	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.2222	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2222	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.2222	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2222	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.2308	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.2308	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2353	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2439	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
1.2500	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.2500	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.2667	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.2667	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
1.2727	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.2785	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.2857	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.2933	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.3026	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.3333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1

1.3418	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.3567	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.3750	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.3913	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.4000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.4038	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
1.4211	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.4615	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.5000	0.1255	35.060115	0.1662	31.331953	32.7094	12.3800	0
1.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.5000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.5000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.5385	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.5625	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.5736	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.6000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.6087	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.6250	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.6667	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.6667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.6667	0.1105	34.073076	0.1451	29.650288	31.8438	10.9011	1
1.7000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7143	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7143	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7143	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7500	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.7500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7619	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.7727	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
1.7778	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
1.7931	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.8125	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.8750	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
1.9474	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
1.9565	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
1.9630	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.0000	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.0385	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.0435	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
2.0625	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.1000	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
2.1111	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.1481	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.2273	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
2.2500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.2500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.2941	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1

2.3243	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
2.3333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.3333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.3333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.3636	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.3697	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.4091	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.5625	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.5714	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.6364	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
2.6667	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.7500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.7727	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
2.7838	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.8000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.8333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
2.8421	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
2.9091	0.7763	34.528295	0.4932	30.419772	32.2421	11.7465	1
2.9655	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
3.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.0984	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
3.1176	0.1003	35.161112	0.1510	31.331179	32.5318	12.3361	1
3.1429	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.2553	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
3.3333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.3750	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
3.3889	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.3929	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
3.4000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.4000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.4444	0.0935	34.867915	0.1255	30.411838	32.5305	12.3557	0
3.4667	0.0640	35.373003	0.0715	30.826321	33.0824	12.6838	1
3.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.5556	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
3.6429	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.6667	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.7143	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.8000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.8000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
3.9500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
4.2000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
4.2000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
4.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
4.6667	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
4.7333	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
5.2500	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0
5.6364	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
6.5000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1

7.0000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
7.7273	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
9.4231	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
10.2500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
11.2500	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
11.8000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
12.8000	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
12.8824	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
15.5217	0.0201	34.633843	0.2273	31.07257	32.3263	11.8322	1
47.3333	0.0506	35.254591	0.1009	31.170132	32.9214	12.3944	0

Appendix 6: Regression Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.391825901	0.153527537	0.148000198	1.846295266	0.542089109

a. Predictors: (Constant), FR, INF, LDFD, LNMS, LNOP, IR, LNGDP

b. Dependent Variable: SR

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-190.6569412	29.28481582		-6.510436753	1.14896E-10	-248.1190031	-133.1948794
	INF	-16.57955051	2.018427772	-1.926469238	-8.21409155	6.10545E-16	-20.54006787	-12.61903315
	LNGDP	7.556232089	1.963865325	1.540680556	3.84763252	0.000126305	3.702776039	11.40968814
	IR	35.17776016	4.567028005	2.185288274	7.702549694	3.0239E-14	26.21643197	44.13908835
	LDFD	-2.59037636	0.595301844	-0.708148972	-4.351366264	1.48215E-05	-3.758465364	-1.422287356
	LNMS	1.354639478	0.768783986	0.249573966	1.762054755	0.078345023	-0.153852608	2.863131564
	LNOP	-3.343030496	0.65944912	-0.888229629	-5.069429007	4.69778E-07	-4.636987962	-2.04907303
	FR	-0.340542848	0.203167923	-0.082460726	-1.676164436	0.093997574	-0.739194758	0.058109063

a. Dependent Variable: SR

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SR	1080	-0.988505747	47.33333333	0.295257451	2.000236782
INF	1080	0.0201	0.7763	0.1676	0.232418522
LNGDP	1080	34.07307613	35.37300278	34.86899367	0.407838971
IR	1080	0.071492	0.493242	0.18508745	0.124257314
LDFD	1080	29.65028793	31.33195265	30.77675675	0.546818463
LNMS	1080	31.84377771	33.08237998	32.52344259	0.36851652
LNOP	1080	10.90113939	12.68384853	12.07872807	0.531454791
FR	1080	0	1	0.625	0.484347205
Valid N	1080				